Portsmouth Local Plan Support

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PORTSMOUTH CITY COUNCIL, LOCAL PLAN SUPPORT: STRATEGIC TRANSPORT ASSESSMENT

SYSTRA

PORTSMOUTH CITY COUNCIL LOCAL PLAN SUPPORT

STRATEGIC TRANSPORT ASSESSMENT

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1 INTRODUCTION

1.1 Overview

1.1.1 This Strategic Transport Assessment (STA) has been prepared by SYSTRA Ltd (SYSTRA) on behalf of Portsmouth City Council (PCC, the Council), to provide an evidence base for the emerging PCC Local Plan for Regulation 19 Consultation Stage.

1.1.2 PCC is developing a Local Plan for Portsmouth, which sets out future development strategic sites and site allocations. The plan will set out the strategy for meeting future development needs in the city for the period up to 2040. Once adopted, the Local Plan will replace policies in existing planning policy documents and form the basis for making decisions on subsequent planning applications.

1.1.3 The key objectives of this assessment include the following:

- **Evaluate the impact of the strategic sites and site allocations** on the surrounding transport network, covering public transport, active and vehicular modes. This considers impacts at both a local and a strategic scale.
- **Identify any mitigation measures required** to support the levels of targeted growth as well as avoiding detriment to the environment and local communities. The mitigation schemes factor safety as a key consideration for any scheme design.

1.1.4 Mitigation schemes have been developed and modelled to, where possible address the impact of Local Plan traffic, when compared to the future baseline whilst applying a sustainable transport hierarchy to scheme development.

1.2 Terminology

1.2.1 Throughout this report SYSTRA will be referring to Local Plan future developments using the following terms:

- Strategic Sites – large sites allocated within the Local Plan
- Site Allocations – smaller sites allocated within the Local Plan

1.3 Report Structure

1.3.1 Following the introduction, the report contains the subsequent sections:

- **Section 2: Policy and Strategic Context** – Summarises the policy and strategic context for the Local Plan and this STA.
- **Section 3: Proposed Development Strategic Sites & Site allocations**– Describes the location, land use and development quantum of the strategic sites and site allocations.
- **Section 4: Strategic Model Methodology** – Gives an overview of the strategic modelling which has been undertaken using the Sub Regional Transport Model (SRTM), including an overview of the modelling scenarios and a summary of the key

findings and outputs which have informed the detailed junction modelling and design work.

- **Section 5: Local Junction Model Methodology** – Details the methodology for determining the Category 1 junctions, provides an overview of the model set up methodology and associated model calibration/ validation process.
- **Section 6: Local Junction Modelling Impact Assessment** – Summarises the findings of local junction modelling for Category 1 junctions, where the forecast level of traffic generation is expected to impact junction operation. This includes discussion and demonstration of any mitigation works which are proposed to support targeted levels of Local Plan growth.
- **Section 7: Do Something SRTM Results** – Provides an overview of the Do Something SRTM results, with mitigation options in place informed from the local junction modelling.
- **Section 8: Cost Estimates** – Provides high level cost estimates of delivering the proposed mitigation options.
- **Section 9: Summary and Conclusion** – Summarises the STA and reports the key conclusions drawn.

2 POLICY AND STRATEGIC CONTEXT

2.1 Overview

2.1.1 This section describes the national, regional, and local transport related policies and relevant to this STA.

2.2 National

National Planning Policy Framework (2023)

2.2.1 The National Planning Policy Framework (NPPF) was most recently updated in December 2023. The framework outlines the national planning policies, including those relating to transport, its role in the planning procedure and its impact on advancing sustainable development. It is relevant to this report as it outlines the criteria for the transport evidence base that is required for Local Plans.

2.2.2 Paragraph 108 of the NPPF details the transport issues that should be considered in plan-making and development proposals. These include:

- the potential impacts of development on transport networks;
- opportunities from existing or proposed transport infrastructure, and in changing transport technology and usage;
- opportunities to promote walking, cycling and public transport use;
- the environmental impacts of traffic and transport infrastructure; and
- patterns of movement, streets, parking, and other transport considerations

2.2.3 The NPPF identifies that significant development should be focused on locations which are, or can be made, sustainable. Paragraph 109 states that planning policies should "[limit] the need to travel and [offer] a genuine choice of transport modes" to reduce "congestion and emissions and improve air quality and public health".

2.2.4 To reduce the number and length of journeys, Paragraph 110 encourages a mix of land uses across an area and within larger scale sites.

2.2.5 Regarding local parking standards, Paragraph 111 of the NPPF specifies that policies should consider the accessibility and the type, mix and use of local developments. They should consider the availability of and opportunities for public transport, car ownership levels and anticipate provision for low-emission vehicles.

2.2.6 Paragraph 112 states that the quality of town centre parking facilities should be improved alongside measures to promote safety and accessibility for pedestrians and cyclists.

Infrastructure Act 2015

2.2.7 Parliament introduced the Infrastructure Act in 2015 and transport is one of the main themes covered by this act. This act enabled the creation of Highways England (now National Highways) and sets out measures to streamline the delivery and implementation of highways

and transport schemes. It also provided the mandate for new Cycling and Walking Investment Strategies.

The Second DfT Cycling and Walking Investment Strategy (CWIS2) (2023)

2.2.8 DfT's Cycling and Walking Investment Strategy was updated in March 2023. It outlines the Government's ambitions to "make walking and cycling the natural choices for shorter journeys, or as part of a longer journey by 2040." The government aims for 50% of all journeys in towns and cities to be walked or cycled by 2030. The strategy set outs creating people-friendly streets, investing in cycling routes, and promoting active travel, with targets such as 55% of primary school-aged children walking to school by 2025.

2.2.9 The strategy includes substantial government investment for redesigning urban areas to encourage active travel, fostering inclusivity, and establishing Active Travel England to set ambitious standards for infrastructure, development design, and behaviour change. Active Travel England will "play a significant role in the spatial planning system, ensuring that developers, local planning authorities and others involved in, or undertaking, development embed active travel infrastructure in their policies and design from the outset".

DfT Circular 01/2022 (2022)

2.2.10 The DfT Circular 01/2022 'Strategic Road network and the delivery of sustainable development' was published in December 2022 and sets of the policy of the Secretary of State in relation to the Strategic Road Network (SRN). When undertaking any assessment in future as part of the preparation of the Local Plan, the Council should ensure that it accords with the policy advice outlined in this document.

2.2.11 Key points in the policy include, but are not limited to:

- The policy provides a significantly greater emphasis on the principles of sustainable development. Consequently, the Council will be expected to promote development at locations that are or can be made sustainable (in accordance with the long-standing requirements of the National Planning Policy Framework (NPPF)) and where opportunities to maximise walking, wheeling, cycling, public transport and shared travel have been identified;
- The policy is also clear that plan-making and decision-taking should ensure that developments optimise the potential of sites to support local facilities and sustainable transport networks. As such, this thinking should be embedded into site selection and how to develop Local Plan policies; and
- It is the responsibility of the Council to present a robust transport evidence base in support of the Local Plan. Demand forecasting models and cumulative assessment should be undertaken which has been prepared to avoid, or significantly reduce, the need for additional infrastructure on the SRN and where development can be delivered through identified improvements to the local transport network, to include infrastructure that promotes walking, wheeling, cycling and public transport and shared travel.

2.2.12 The Local Plan strategic assessment will ensure that any mitigation measures considered in the Do Something scenario will consider a range of sustainable and active travel modes including walking, cycling, public transport and shared travel. Trip rates to represent the

population mix and characteristics for each zone in the SRTM are accounted for in the model. Consequently, a robust evidence base supporting the Local Plan will be provided, where any mitigation noted has been prepared to avoid the need for significant infrastructure on the SRN, identifying improvements and balancing priorities across all modes of transport.

DfT Transport Investment Strategy (2017)

2.2.13 The government has pledged to establish a Major Road Network (MRN) through England, focusing on the most heavily trafficked and economically significant local authority A roads. In pursuit of this initiative, the Government has outlined five key policy objectives: alleviating congestion, facilitating housing delivery, promoting economic growth, and rebalancing, ensuring support for all road users, and supporting the Strategic Road Network (SRN).

2.2.14 The DfT has published its proposals for investment priorities for the Major Road Network (MRN). As part of this initiative, Transport for the South-East and Portsmouth City Council are seeking to include City Centre Road as part of the Large Local Major scheme.

DfT Network North: Transforming British Transport (2023)

2.2.15 The DfT's Network North policy paper sets out the funding which will be used to change the approach to transport infrastructure, in line with the following three priorities:

- Drive better connectivity within towns, suburbs and cities;
- Drive better connectivity between towns and cities; and
- Improve everyday local journeys for people.

2.2.16 The DfT is increasing funding for most existing Major Road Network and Large Local Major road schemes. These schemes, subject to successful business case approval, will benefit from an uplift in government contribution from 85% to 100% of their costs at the Outline Business Case (OBC) stage. The increased funding will help ensure the delivery of these road schemes.

2.2.17 The Portsmouth City Centre Road scheme is included on the list of schemes benefiting from the uplift in government funding.

Decarbonising Transport – A Better, Greener, Britain (2021)

2.2.18 The DfT's Decarbonising Transport report, published in July 2021, sets out the commitments and actions required to decarbonise the entirety of the United Kingdom's transport network. The government ambition is to end the sale of all new diesel and petrol cars by 2035, and that all new cars and vans must be fully zero emission at the tailpipe from 2035.

2.2.19 A strategic priority is to accelerate the modal shift to public and active transport, with the target of making sustainable modes the natural first choice of travel for daily activities. Local authorities are to take action to make the best use possible of space to enable active travel through the transformation of local public transport operations.

2.2.20 Buses are identified as being the easiest and quickest way of improving public transport across the country, with £3 billion being invested into reshaping the bus network along public service lines nationwide; with lower and simpler fares, thousands of zero emission buses, and more priority lanes.

2.2.21 Commitments to further the sustainable transport network are outlined, including the exploration of introducing new sustainable travel reward schemes supported by businesses, community organisations and charities.

2.2.22 The report highlights a priority to shift towards an integrated and affordable net-zero public transport network. This is to be enhanced through the greater provision of walking and cycling routes to and from stations, including a greater provision of secure cycle storage and charge points throughout the UK.

Bus Back Better: National Bus Strategy for England (2021)

2.2.23 The DfT's National Bus Strategy report, published in March 2021, sets out the government's strategy to reduce the significant shift caused by COVID-19 from public transport to private car through the improvement of the bus network, primarily by improving service frequency, reliability, and coordination. This strategy follows £3 billion of funding announced in 2020 to improve bus services across the UK to London standards and contribute towards the wider ambitions of achieving net-zero carbon emissions.

2.2.24 It is acknowledged that local bus networks are to be managed by local authorities, and therefore £25 million is initially committed to support partnership and franchising development, including a Bus Centre of Excellence.

2.2.25 Devolution of the Bus Service Operators Grant is to be provided to Local Transport Authorities and Mayoral Combined Authorities who request it. This requires authorities to develop a key route network and include development of bus priority measures and improved bus performance.

Gear Change – A Bold Vision for Cycling and Walking (2020)

2.2.26 The DfT's Cycling & Walking Vision plan, published in July 2020, establishes the government's commitment to improving cycling and walking network throughout the country, by improving the accessibility and safety of active modes. The plan aims for places to be truly walkable, with cycling and walking being the natural first choice and half of all journeys in towns and cities being cycled or walked by 2030.

2.2.27 The shift to active modes will be achieved by funding infrastructure schemes and behaviour change projects; putting cycling and walking at the heart of transport, place-making, and health policy; empowering and encouraging local authorities; and enabling people to cycle and protecting them in doing so.

2.2.28 Cycling is to be put at the centre of future developments, with the report pledging to develop new standards for sufficient secure bike storage in all new residential and non-residential developments. Additionally, all housing and business developments are to provide high-quality cycling and walking networks, green spaces and green routes, and supporting facilities such as cycle parking.

2.2.29 The plan also places importance on the quality of cycle infrastructure being installed along roads, and new cycling design guidance is published alongside the plan setting out the standards expected if schemes are to receive funding, within Local Transport Note 1/20.

Cycle routes will be required to be planned holistically as part of a network, as opposed to isolated stretches.

2.3 Regional

2.3.1 Portsmouth City Council, which is a unitary authority, works with several other organisations involved in the delivery and management of transport networks. These include the following:

- National Highways is responsible for maintaining, operating, and improving the Strategic Road Network (SRN), specifically, in the context of Portsmouth, the busy and congested A27 corridor;
- Solent transport coordinates strategic transport planning in the area on behalf of Hampshire Council, PCC, Southampton City Council, and Isle of Wight Council. Transport for South Hampshire (TfSH), the predecessor to Solent Transport, was set up in 2007 by the three highway authorities in the South Hampshire sub-region: Hampshire County Council, PCC and Southampton City Council. In March 2013 Isle of Wight Council joined the TfSH partnership. In June 2014, TfSH was rebranded to become Solent Transport.
- Public Transport Operators and Network Rail cooperate with PCC. PCC and the two main bus operators (First Hampshire & Dorset and Stagecoach South) have signed an Enhanced Partnership agreement under the 2017 Bus Services Act, which defines legal obligations relating to plans to improve bus infrastructure, fares, ticketing and other matters concerning bus services in the city.

PfSH Spatial Position Statement (2023)

2.3.2 The 2023 Spatial Position Statement has been produced by the authorities forming PfSH and aims to provide guiding principles for local plans to help deliver sustainable development within south Hampshire. The new statement forms a significant part of the statutory duty to co-operate between councils and will inform the preparation of Local Plans by each council within PfSH.

2.3.3 The statement notes the introduction of the CAZ in Portsmouth city centre and that a Local Transport Plan prioritising sustainable and active travel to support people and places in reducing car dependency and vehicular emissions has been adopted by PCC.

2.3.4 Strategic Principle 1: Sustainable Growth states that to achieve the transition to net zero carbon, a fundamental modal shift in transport to zero and low carbon travel will be required, including active travel and public transport. Site selection and capacities will need to be optimised to promote modal shift and avoid car dependency where possible.

2.3.5 Strategic Principle 6: Integrating Land Use & Transport Planning promotes the location and form of development in local plans and investment in transport infrastructure that will support the delivery of a de-carbonised and accessible transport system. The statement notes that significant infrastructure investments will need to be delivered to make new communities sustainable and to mitigate negative effects on existing communities.

2.3.6 Poor air quality is considered a problem in locations across the study area, with the implementation of the Portsmouth CAZ noted as a response to this challenge. Development

should be located to minimise exacerbating air quality problems and regard should be had to designated AQMAs when determining strategic approaches to development.

Transport for South-East (TfSE) Transport Strategy (2022)

2.3.7 Transport for South-East is a sub-regional transport body for the South-East of England that brings together sixteen local transport authorities, five local enterprise partnerships, forty-six district and borough authorities and a range of wider stakeholders from the worlds of transport, business and the environment. It has a strategy which outlines its mission to grow the South-East's economy by delivering a safe, sustainable, and integrated transport system.

2.3.8 By 2050, its ambition is to create "a high-quality, reliable, safe and accessible transport network will offer seamless door-to-door journeys enabling our businesses to compete and trade more effectively in the global marketplace and giving our residents and visitors the highest quality of life".

2.3.9 Transport-specific principles underpinning the Strategy include:

- **Protecting the environment**, via "attractive, sustainable alternatives to the car and cleaner transport freight, while seeing how to manage demand. Land use and transport planning must be considered together, alongside planning for digital connectivity and power technologies."
- **Creating great places to live**, by considering the role of the transport network in improving the places they serve where people can live and work with the highest quality of life.
- **Putting people first**, by understanding travel choices and patterns, emphasising the entirety of a person's journey to enhance physical integration of transport modes and simply journey planning and payment processes.
- **Planning regionally for the short, medium and long-term**, by taking a holistic view of the transport system, to see how all relate and interplay with each other.

2.3.10 As the sub-national transport body for region, Transport for the South-East was tasked with providing advice to government on the South East's investment priorities for the Major Road Network (MRN). In Portsmouth, Transport for the South-East considered City Centre Road should be part of the Large Local Major scheme.

Transport for South East Strategic Investment Plan (2023)

2.3.11 Transport for South East (TfSE) is the sub-national transport body for the south east of England. The Strategic Investment Plan, published in March 2023, provides a framework for investment in strategic transport infrastructure, services and regulatory interventions over the coming 30 year period. The plan's vision is to create a high-quality, reliable, safe and accessible transport network for door-to-door journeys.

2.3.12 The plan outlines specific packages of interventions, with those relevant to Portsmouth listed in the table below.

Table 1. TfSE Strategic Investment Plan Intervention Packages – Portsmouth

Category	Intervention Package

Core Rail Package	Portsmouth Station Platforms
Enhanced Rail Package	Fratton Rail Freight Hub
Mass Transit	South East Hampshire Rapid Transit Future Phases, Tipner Transport Hub, Southsea Transport Hub, Improved Gosport-Portsmouth and Portsmouth-Hayling Island Ferries
Highways	Portsmouth City Centre Road, Horsea-Tipner Bridge
Active Travel	South East Hampshire Area Active Travel (including LCWIPs), Portsmouth Eastern Road Active Travel Bridge Extension, Portsmouth Eastern Road East-West Bridge

2.3.13 Network Rail, Solent Transport, and the Solent authorities have developed a comprehensive package of interventions that will deliver improvements to urban and inter-urban rail journeys. It is also recognised that to realise the service frequency ambitions, a longer- term package of interventions is needed to unlock significant capacity and, potentially, shorter journey times between Southampton and Portsmouth city centres. In addition, the Sussex Coast Rail million investment package of £80 million aims identifies the potential for more frequent services and to create faster journeys between Brighton, Chichester, Portsmouth and Southampton.

2.3.14 The plan notes that PCC is developing and delivering a comprehensive, high quality bus rapid transit system that will serve the Portsmouth City region, as well as plans to reduce congestion and public health outcomes by increasing rates of cycling and walking.

2.4 Local

2.4.1 Portsmouth City Council is the local authority of the city of Portsmouth, combining the power of a non-metropolitan county and district council.

Portsmouth's Local Transport Strategy 2021-2038 (LTP4)

2.4.2 Portsmouth's Transport Strategy details the Council's vision for travel in Portsmouth until 2038. It was adopted in October 2021.

2.4.3 The Portsmouth Transport Strategy (2021 – 2038) and the supporting Implementation Plan (2022/23 – 2024/25) form the fourth Local Transport Plan (LTP4) for Portsmouth. The Portsmouth Transport Implementation Plan provides an indicative prioritised delivery plan up to 2028 to support the delivery of the Transport Strategy.

2.4.4 The LTP4's objectives are supported by various existing or planned subject-specific strategies:

- **Deliver Clean Air**: Local Air Quality Plan; emerging Air Quality Strategy; Air Quality Action Plan; Parking Strategy; Road safety and casualty report; Sustainable modes of travel to school;
- **Prioritise walking and cycling**: Rights of Way Improvement Plan; Walking and Cycling Strategy; Local Cycling and Walking Infrastructure Plan;
- **Transform public transport**: Emerging Public Transport Strategy; Bus Service Improvement Plan; Solent Connectivity Study;
- **Support business and protect our assets**: Highways Maintenance Strategy; Highways Asset Management Strategy; Street Lighting Strategy; Freight Strategy.

2.4.5 Eighteen policies in the strategy are each grouped under one of the four strategic objectives. They can be divided into the following thematic categories:

- Air Quality and Pollution Reduction (Policies A, D, E, O)
- Sustainable & Active Transport Infrastructure (Policies B, G, H, I, J, K, L, M)
- Behaviour Change and Education (Policy F)
- Traffic Management and Infrastructure Maintenance (Policies N, P, Q, R)

Portsmouth Plan (2012)

2.4.6 The Portsmouth City Local Plan, initially adopted in 2006, underwent revisions in July 2009, resulting in the deletion of several policies. The Portsmouth Plan, established in 2012, took precedence as the primary planning policy document at the local level.

2.4.7 Objective two of the Portsmouth Plan is "to make Portsmouth an accessible city with sustainable and integrated transport". Most of the other seven primary objectives are associated with transport:

- To make Portsmouth an attractive and sustainable city;
- To develop Portsmouth as a city of innovation and enterprise, with a strong economy and employment opportunities for all;
- To make Portsmouth a city in which everyone feels and is safe;
- To encourage and enable healthy choices for all and provide appropriate access to health care and support;
- To enhance Portsmouth's reputation as a city of culture, energy and passion offering access for all to arts, sport and leisure;
- To ensure there is adequate supporting infrastructure for the new development and growth of the city.

2.4.8 The Portsmouth Plan states that "transport is a major challenge for the city especially in relation to accommodating additional development and visitors". Peak-time and seasonal congestion are key issues. The Plan acknowledges that future planning documents must call for "a lifestyle change away from using the private car to other forms of transport."

2.4.9 With regards to transport, the 2012 Portsmouth Plan mentions that "the regeneration and economic success of Portsmouth is also dependent upon the reliability of the sub-regional strategic road network, enabling people, freight, and goods to access the city with ease". This will continue to be relevant to the forthcoming Local Plan.

Infrastructure Delivery Plan (2021)

2.4.10 PCC developed its Infrastructure Delivery Plan as part of the development of an updated Local Plan for the period to 2040. The plan assesses infrastructure needs and includes information relating to responsibilities and delivery partners. PCC Transport, National Highways, Network Rail, Bus companies and Ferry/Hovercraft companies were all consulted.

2.4.11 As the IDP is a live document, further consultation has taken place to update the IDP in preparation for the Regulation 19 stage of the Local Plan process. PCC have reconsulted with all transport providers who operate or deliver transport infrastructure within Portsmouth.

2.4.12 The City of Portsmouth area forms part of scope for the Solent Connectivity Strategic Outline Business Case (SOBC). This SOBC work follows on from the Solent Connectivity Continuous Modular Strategic Planning (CMSP) published in 2020 which found that public transport networks within the Solent area had not seen significant adaptation to changing populations within the area, and as such there is a high reliance on the private car. For medium to longer distance journeys, train services are often competitive with driving in terms of journey time and speed, but train services at many stations do not operate frequently enough to provide an attractive alternative to the private car. The strategy sought to explore opportunities for improved, more frequent rail links within the Solent area.

2.4.13 Network Rail are also currently undertaking the Mainline (Tranche 2) Strategic Study, looking at demand into London and potential service requirements to meet that demand to 2050.

2.4.14 Further improvements and schemes are also being implemented to improve active travel and public transport across the City. In the medium to long term, PCC and partners (Hampshire County Council, Isle of Wight Council and bus and ferry operators) are promoting the development of the South East Hants Rapid Transit (SEHRT) network to better serve short to medium distance travel within the Portsmouth city region. The SEHRT proposition combines many existing elements of bus priority and improved interchanges (some recently delivered since 2021 , or currently being delivered- through Transforming Cities Fund and Bus Service Improvement Plan funding) with proposals for further bus priority and service quality and frequency improvements to create, in the long term, a bus rapid transit network across five routes in the wider Portsmouth city regio. Four of these routes connect satellite towns (Havant, Waterlooville, Fareham and Ryde) to Portsmouth and provide an opportunity to develop bus rapid transit services to provide a viable alternative to driving for many more journeys than today.

2.4.15 PCC has also published a Local Cycling and Walking Infrastructure Plan (LCWIP) which sets out the city's plans to develop high quality cycling and walking networks across the city. The LCWIP is an ambitious plan that proposes significant investment over the next 10 years that looks to transform the city for both walking and cycling. The Council is currently delivering elements of the LCWIP network as funding opportunities permit.

2.4.16 The largest strategic transport infrastructure scheme proposals identified in the IDP have also been identified by Transport for the South East (TFSE) in their Strategic Investment Plan (SIP), indicating that these are transport improvements that are important to the sustainable development of the wider region. A total of 13 major transport improvement schemes in the city are identified in the TFSE SIP.

The IDP will remain a live document and continue to evolve as the Local Plan progresses.

Draft Emerging Local Plan 2020-2040 (2023)

2.4.17 The draft emerging Portsmouth Local Plan is the statutory development plan for Portsmouth and it will guide development in the City up to 2040. The plan sets out how PCC believes the city should develop and allocates the strategic sites that are fundamental to achieving the 2040 Vision and a number of other allocations. Once adopted, this plan will supersede the 2012 Portsmouth Plan.

2.4.18 The following strategic objectives directly relate to transport.

A Green City – *We have excellent air quality because of our green spaces and sustainable transport, and this means our people live healthy and active lives. We are carbon neutral, use renewable energy and actively work to address climate change. We protect and enhance both our land and maritime environment for future generations.*

A City with Easy Travel – *Fewer journeys are made by car because we have excellent public transport connections between bus, train, cycling and walking routes, making it easier and more enjoyable to be out and about. We encourage and support more walking and cycling, and we make it easy for people to travel regionally, nationally and internationally for work and pleasure.*

2.4.19 The plan notes that Portsmouth has been identified by the government as an authority with persistent long-term exceedances of the legal limits for nitrogen dioxide. In response, PCC prepared a Local Air Quality Plan, working closely with Government's Joint Air Quality Unit, to achieve compliance with legal limits for nitrogen oxide in the shortest possible time. The emerging Local Plan's Air Quality and Pollution policies seek to help implement the Local Air Quality Plan.

2.4.20 Development Management Policy PLP35: Air Quality and Pollution states that planning permission will only be granted for development proposals when it can be demonstrated, in a proportionate manner, that they will not contribute to and will not be subject to unacceptable levels of pollution, including relating to air quality, dust, noise and vibration, which cannot be mitigated.

2.4.21 Proposals will need to take account of where development is likely to have an adverse effect on air quality, especially in areas where it is already known to be poor and could affect the living conditions or health of occupiers, and where it could be impacted by Portsmouth's Local Air Quality Local Plan, Air Quality Management Areas and the Clean Air Zones, as well as the potential for cumulative impacts. Opportunities to improve air quality or mitigate impacts should be maximised by traffic and travel management or green infrastructure provision and enhancement.

2.4.22 The emerging plan acknowledges dependence on private car use has resulted in unsustainable levels of carbon emissions from transport, unhealthy polluted air, regular traffic congestion and severely reduced levels of physical activity. Action is needed now to shape a future where people opt to travel sustainably.

2.4.23 The provision of a safe, convenient, affordable to use, and efficient transport network is key in helping to build vibrant local communities, enable regeneration, and achieve an environmentally sustainable future. Prioritising walking and cycling and transforming public transport will play a key role in delivering a people centred travel network across the city, linking into and connecting local areas.

2.4.24 Strategic Policy PLP47: Movement and Transport states that development proposals will be permitted where they deliver a people centred travel network that prioritises walking, cycling, public and shared transport, in line with LTP4. Proposals should contribute to the protection and/or delivery of a network of high quality walking and cycling routes throughout

the City, including those identified in the Local Cycling and Walking Infrastructure Plan (LCWIP).

2.4.25 Development proposals will be permitted where they protect and enhance highway safety on the local and strategic highway networks.

2.4.26 To encourage the uptake and continued use of sustainable modes of transport, the location, design and layout of development will need to show priority being given to pedestrian, cycle movements and access to sustainable transport modes. There is the potential to further increase the uptake in sustainable transportation methods by improving and upgrading or providing railway, bus, cycle and other infrastructure. Improvements can make public and sustainable transport a more attractive option.

2.4.27 The LCWIP highlights priorities to improve walking and cycling infrastructure, emphasising the need to create an active travel network that encourages city-wide use. It aims to ensure that new infrastructure for walking and cycling will be accessible to everyone.

2.5 Summary of Policy

2.5.1 Overall, the policy documents summarised above provides an overview of the context that this STA has been prepared against. This STA ensures to take policy into consideration, focusing on facilitating sustainable development and population growth. This STA therefore considers the above policies into plan making. Proposals should demonstrate how negative impacts on health have been minimised and how opportunities for protecting and improving people's health and wellbeing have been fully considered.

3 PROPOSED DEVELOPMENT STATEGIC SITES & SITE ALLOCATIONS

3.1 Overview

3.1.1 This section of the STA describes the developments identified by PCC, that form the projected growth set out in the Local Plan. PCC have broken down the developments using the following naming methods (with further information provided in Chapter 4 and 5 of the Local Plan 2040 itself):

- Seven Strategic Sites- see **Table 2**.
- Six Site allocations– see **Table 3**.

Table 2. Strategic Site Delivery

Site	Dwellings	Commercial Floorspace	Other Benefits
Tipner West & Horsea Island	• 814-1,250	• 58,000 m^2 marine hub	• Flood defences • Land decontamination • New public transport bridge (included as part of the development proposal to enable growth of this scale).
Tipner East	• 1,056	• 716 m^2 commercial floorspace (Classes E, F1 and F2) • 840 m2 ancillary commercial uses at the transport hub	• Transport hub with 2,650 car parking spaces (Note that this supports the necessary modal shift to support the level of development targeted in the City Centre). • Flood defences • Land decontamination
Lakeside North Harbour	-	• 50,000 m^2	• 20% bio-diversity net gain
Portsmouth City Centre	• 4,158	• 20,000m^2 (1,546m^2 net)	• 2.9ha park • 20% bio-diversity net gain at City Centre North • Enhanced Culture and Leisure offer • City centre road re-alignment and bus priority routes • Transport Hub with 2,650 car parking spaces at Tipner which supports the unlocking of development at the City Centre through interception of vehicles and encouragement of modal shift.
Fratton Park & the Pompey Centre	• 710	• Expanded stadium • Hotel	• Off road link from the station to the Pompey Centre and Fratton Park

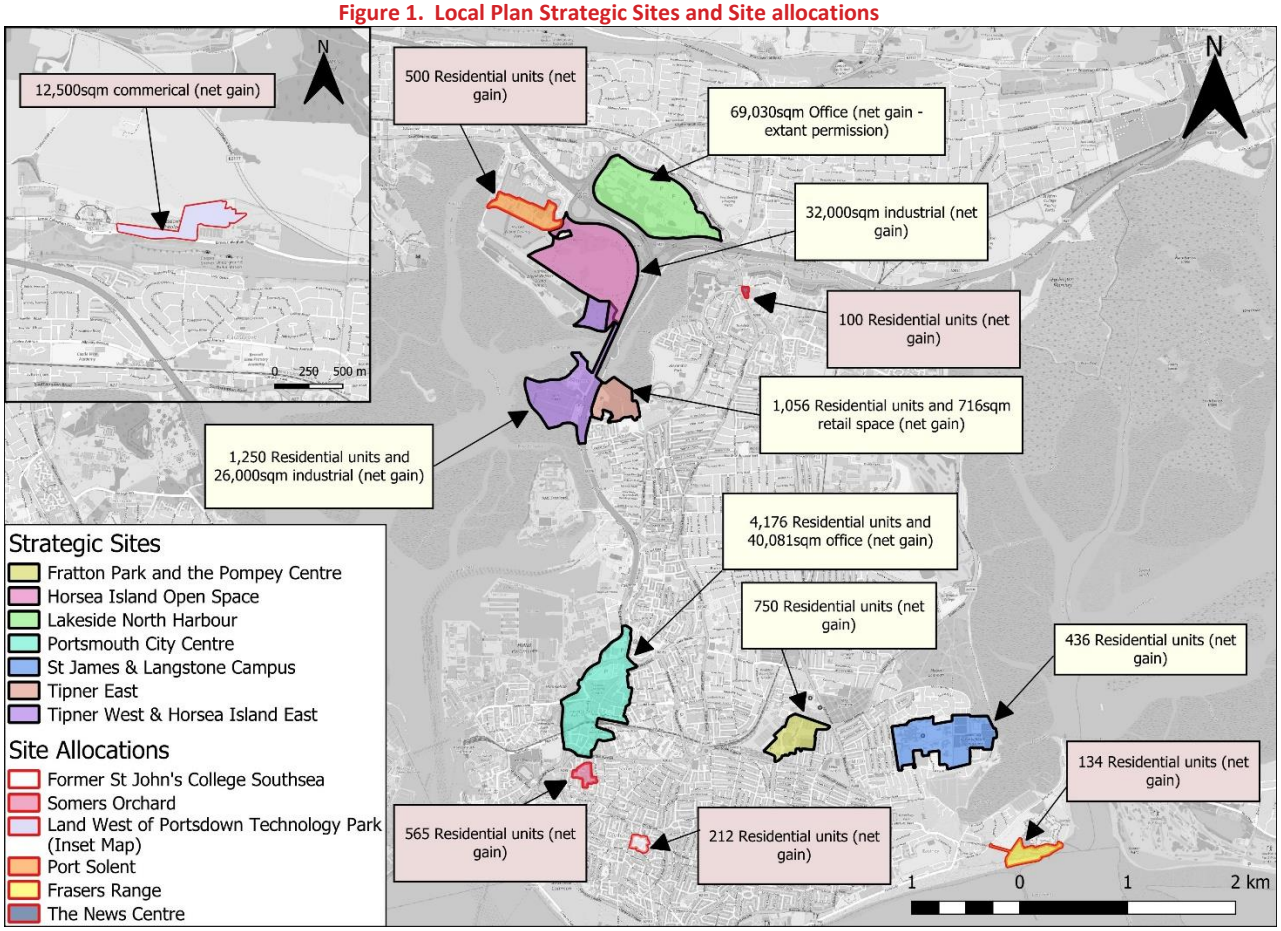
		• Mixed conference and event facilities	
St James' & Langstone Campus	• 417	-	• Retention of public access and parkland setting
Horsea Island Open Space	-	-	• 64 ha of open space • Bus way linking Tipner to Port Solent via proposed Tipner-Horsea bridge.

Table 3. Site Allocations Delivery

Site	Dwellings	Commercial Floorspace	Other Benefits
Land West of Portsdown Technology Park	-	12,500 m^2	Regeneration of a mainly brownfield site in a prominent location
Port Solent	500	-	Marine uses, improved accessibility, improved sea defences
St John's College	212	-	Improved connectivity, protected heritage assets
Fraser Range	134	-	New sea wall
The News Centre	100	-	Electric bus depot
Somers Orchard	565	-	Improved connectivity, Over 50% affordable housing

3.1.2 An annotated map providing the location and associated development quantum (net gain) for the strategic sites and site allocations is shown in **Figure 1.** A copy of this map can also be found in **Appendix A**.

Figure 1. Local Plan Strategic Sites and Site allocations



3.2 Strategic Sites

3.2.1 **Table 4** below provides more information on each of the strategic sites. Further detailed information for each strategic site can be found in Chapter 4 of the Local Plan.

Table 4. Strategic Sites Descriptions

Site	Vision	Location	Figures/Transport Links
Tipner West & Horsea Island East	Will form a new gateway to the City along with Tipner East and will be home to a new healthy and happy community.	Located immediately adjacent to the M275 motorway at the northwest part of Portsea Island and is bounded on three sides by Tipner Lake, which is part of Portsmouth Harbour.	• 58,000 m^2 of marine employment floorspace (class E(g) offices, research and development, light industrial, B2 general industrial and B8 storage or distribution) • 814 to 1,250 residential dwellings

			• A bridge between Tipner West and Horsea Island East • Local shop and community facilities
Tipner East	Will form a new gateway to the city along with Tipner West and will be home to a new healthy and happy community.	Located immediately adjacent to the M275 motorway at the northwest part of Portsea Island. It is bounded by Tipner Lake to the north, which is part of Portsmouth Harbour, while to the south is the residential area of Stamshaw with terraced housing and a primary school.	• Enabling works and sea defence wall • 1,056 dwellings • Transport hub with 2,650 car parking spaces and frequent bus services • 716 m^2 commercial floorspace • 840 m^2 ancillary commercial uses at the transport hub
Lakeside North Harbour	Will still be the premier location for high quality business space in Portsmouth.	Built on reclaimed land from the northern section of Portsmouth Harbour.	• 50,000 m^2 new office floorspace
Portsmouth City Centre	Will fulfil its potential as a centre of culture and creativity for the City.	Located to the centre-west of Portsea Island, the City Centre is an area of some 60 hectares extending from Hope Street in the north to Guildhall Walk and Winston Churchill Avenue to the south.	• 4,158 dwellings • 20,000m^2 Gross (1,546m^2 Net) office • City Centre Road Scheme • Bus priority measures • Supported by the transport hub at Tipner East to facilitate modal shift from private vehicle.
Fratton Park & the Pompey Centre	Will be a revitalised locality and a cultural hub. Fratton Park will remain the home of Portsmouth Football Club.	Fratton Park is set in the heart of the City. Pompey Centre is located to the south-west, west and north-west of Fratton Park.	• Expansion to the north stand of Fratton Park Football Stadium to increase the capacity from 21,000 to between 26,000 and 30,000 • 460 residential dwellings • 250 residential dwellings • Small scale ground floor commercial/ retail units

St James' & Langstone Campus	Will be home to a new healthy and happy community on the edge of Langstone Harbour.	Located in Milton, an area on the eastern edge of Portsea Island with a predominantly suburban character.	• 209 residential dwellings • 88 residential dwellings • 120 residential dwellings
Horsea Island Open Space	Will host a large public open space as part of a green gateway for the City.	Located off the northern shore of Portsmouth Harbour.	• 64ha of Strategic Open Space • Bus connection from Tipner-Horsea bridge to Port Solent • Active travel connections

3.3 Site allocations

3.3.1 **Table 5** below provides more information on each of the site allocations. Further detailed information for each allocation can be found in Chapter 5 of the Local Plan.

Table 5. Site allocations Descriptions

Site	Vision	Location	Figures/Transport Links
Land West of Portsdown Technology Park	Has been assessed as a potential employment site.	Located on the prominent ridge of Portsdown Hill, which is the extensive chalk escarpment to the north of the City.	• 12,500 m^2 R&D and / or manufacturing (B2)
Port Solent	Will be home to maritime, marine and advanced manufacturing sectors whilst providing new housing to support the growing workforce.	Located in the northwest corner of the City on the northern reaches of Portsmouth Harbour.	• Flood management measures • Improved access for sustainable transport modes from and to the A27 • 500 residential dwellings. • Safeguard land for future links to busway bridge
St John's College	Has been identified as a potential site for dwellings.	Located in the heart of Southsea and in Owen's Southsea Conservation Area.	• 212 Dwellings
Fraser Range	Has been identified as a site that will deliver a significant quantity of new dwellings, a new sea wall flood defence and a new, extended coastal path which secures access around	Located in an area of distinct character on the water's edge at the southeastern point of Portsea Island.	• New Sea Wall and Flood Defence Works including Attenuation Ponds • Main Road and access infrastructure • 40 residential dwellings and

	the coast of Portsea Island.		landscaping (0-5 years) • 94 residential dwellings and landscaping (6-10 years)
The News Centre	Intended to serve as a gateway location to Portsea Island, with commercial uses and a sustainable transport hub.	Situated on a prominent junction of the A3 and London Road (A2047) in Hilsea and in very close proximity to the M27 and Portsbridge roundabout.	• Transport - electric bus depot • 100 dwellings (net)
Somers Orchard	Will deliver significant amounts of good quality social and private rented housing in a way that integrates with and is a positive addition to the existing community.	Located in the western part of the Somerstown area of the City.	• 520 Dwellings (Horatia and Leamington) (gross) • 46 Dwellings (Gibson Centre) (gross) • Landscaping of the wider allocation site

3.3.2 Overall, this chapter highlights the level of development associated with the Local Plan, through strategic sites and site allocations. This level of targeted growth has been assessed further on in this report, in relation to impact on the transport network.

4 STRATEGIC MODEL METHODOLOGY

4.1 Model Development

4.1.1 This STA uses the Sub Regional Transport Model (SRTM) to assess the traffic growth associated with the proposed developments for the Local Plan.

4.1.2 SYSTRA was commissioned, as part of a wider team, to support Solent Transport with the development and application of the SRTM for this nationally important area. An update to the original 2010 model was completed in early 2017 to bring the base year forward to 2015. In early 2021, a further update was completed to revalidate the model against a 2019 base year.

4.1.3 It should be noted that the SRTM does not account for the impact of COVID-19 on traffic levels and patterns, reflecting a robust assessment as manual adjustments have not been made for reduced trip making associated with homeworking as well as greater peak spreading due to an increase in flexible working patterns.

4.1.4 The SRTM has been developed to support a wide-ranging set of interventions across the Solent Transport sub-region, and is specifically required to be capable of:

- Forecasting changes in travel demand, road traffic, public transport patronage and active mode use over time as a result of changing economic conditions, land-use policies and development, and transport improvement and interventions (schemes);
- Testing the impacts of land-use and transport policies and strategies within a relatively short model run time; and
- Testing the impacts of individual transport interventions in the increased detail necessary for preparing submissions for inclusion in funding programmes.

4.1.5 The SRTM has been used for forecasting for numerous strategic Transport Assessments in the Portsmouth, Southampton and South Hampshire area, constituting a widely used tool for assessing transport patterns.

4.1.6 More information on the components which comprise the SRTM can be found in the modelling assumptions note in **Appendix B,** which has previously been provided and agreed with PCC.

4.1.7 In accordance with guidance three weekday periods are modelled in the SRTM, however this STA focuses on the AM and PM peaks:

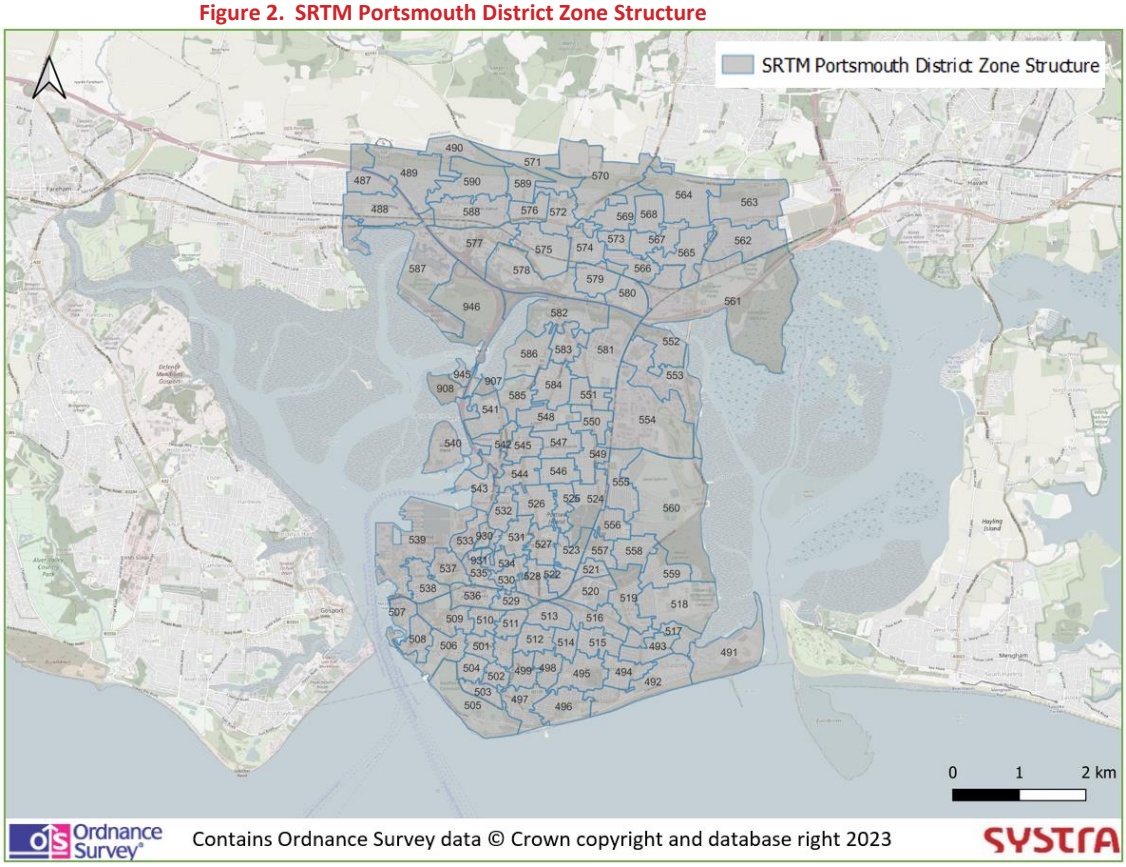
- AM peak: 08:00 to 09:00, being the busiest hour between 07:00 and 10:00, (defined as 38.2% of the three hours for Highway and 40% for Public Transport);
- Inter peak: average of 10:00 to 16:00 (i.e. 16.7% of the six hours for both modes); and
- PM peak: 17:00 to 18:00, the busiest hour between 16:00 and 19:00, (defined as 35.8 % of the three hours for Highway and 40% for Public Transport).

4.1.8 The SRTM has a base year of 2019, and forecast years of 2026, 2031, 2036, and 2041. For this Local Plan assessment, scenarios were forecast to 2041. As the Local Plan period is up to 2040, only committed development until 2040 has been included in the model.

The SRTM is a strategic model and the scope of the model is extensive. As such, the analysis of specific localised traffic conditions necessitates a degree of interpretation and a First Principles Approach in conjunction with a knowledge of local baseline conditions.

4.1.9 **Figure 2** below shows the SRTM zones associated with the Portsmouth area.

Figure 2. SRTM Portsmouth District Zone Structure



4.2 SRTM Model Scenarios

4.2.1 The following scenarios have been included in the SRTM for both the AM (07:00-10:00) and PM (16:00-19:00) network peaks. It is noted that 2041 is the closest scenario year available in the SRTM to align with the 2040 Local Plan period. For Portsmouth, only growth up to 2040 will be included.

- Scenario 1: 2019 Base - Current SRTM Base Model
- Scenario 2: 2041 Baseline - No Local Plan development within Portsmouth except for committed sites
- Scenario 3: 2041 Do Minimum - Full Local Plan development without transport mitigation
- Scenario 4: 2041 Do Something - Full Local Plan development with transport mitigation

Scenario 1 – 2019 Base - Current SRTM Base Model

4.2.2 The SRTM has a Base year of 2019 and represents infrastructure and development as at that time point. The base year model is calibrated and validated against observed data collected in 2019 to provide the basis from which the future modelled years (Scenarios 2-4) are developed.

Scenario 2 – 2041 Baseline - No Local Plan development in Portsmouth except for committed sites and infrastructure

4.2.3 The Baseline forms the scenario against which the proposed Local Plan development quantum scenarios will be assessed.

4.2.4 In this study, the Baseline includes all current (at time of commissioning) completed development and infrastructure within Portsmouth, in addition to all committed development and infrastructure through to 2040. In the Baseline, no allowance is made for Local Plan developments within Portsmouth.

4.2.5 Outside of Portsmouth, development growth is assumed to continue in accordance with the adopted Local Plan's for the respective Boroughs and in accordance with TEMPro v7.2 growth projections for the SRTM modelled area as a whole (TEMPro v7.2 provides more robust results compared to TEMPro v8 as the NTEM v7.2 assumes higher levels of future development in adjacent boroughs and hence greater stress on the transport network than NTEM8 forecasts).

Scenario 3 – 2041 Do Minimum – With Full Local Plan Development, Without Mitigation Measures

4.2.6 The Do Minimum scenario builds on the Scenario 2 – 2041 Baseline, with the addition of the full quantum of proposed development associated to the Portsmouth Local Plan (strategic sites, site allocations and HELAA sites). Where specific development information is not supplied, remaining development will be considered windfall and distributed evenly across the zones in Portsmouth. Growth outside the city is identical to the Baseline. By comparing the outputs of the Do Minimum scenario with the 2041 Baseline, the transport impacts resulting from the Portsmouth Local Plan proposals can be isolated.

Scenario 4 – 2041 Do Something - With Full Local Plan Development, With Mitigation Measures

4.2.7 Scenario 4 will incorporate the highway mitigation measures which are to be proposed by SYSTRA in collaboration with PCC, as part of the local junction mitigation for the Local Plan, following review of the Scenario 1-3 model assessments. Scenario 4 captures the impact of these interventions in the wider context of the full Borough and surrounding areas.

4.3 Trip Rates

4.3.1 More information regarding the trip rates used within the SRTM can be found in section 3.2 of the modelling assumptions note in **Appendix B**.

4.4 Total Growth

4.4.1 Assumptions of what has been included in each scenario can be found in chapter 6 of the modelling assumptions note in **Appendix B**.

4.4.2 **Table 6** below provides a summary of total growth across all zones associated with the 2041 Do Minimum scenario. The Do Minimum 2041 figures include total Local Plan strategic site numbers, HELAA site gains (a selection of HELAA sites are the site allocations in **Figure 1**), any completion and permission gains/losses.

Table 6. Net Change – Total Growth/ Breakdown

Land Use	Net Change	NET CHANGE Breakdown
Residential	+12,875 dwellings	1,465 dwellings = Completions & Permissions 7,668 dwellings = LP developments (this excludes those already included in permissions) 3,742 = HELAA Sites (this excludes those already included in permissions)
Retail	-12,138sqm	-12,854sqm = Completions & Permissions 716sqm = LP developments
Office	+145,342sqm *Any discrepancies due to rounding of the LP Site Allocation figures	78,582sqm = Completions & Permissions 40,081sqm = LP developments 26,680sqm = HELAA Sites (this excludes those already included in permissions)
Industrial	+105,404sqm	3,004sqm = Completions & Permissions 58,000sqm = LP developments 44,400sqm =HELAA Sites
Warehousing	+3,827sqm	Completions & Permissions Only
Hotels & Accommodation	+11,312sqm	Completions & Permissions Only
Healthcare	-1,356sqm	Completions & Permissions Only
Leisure	+9,164sqm	Completions & Permissions Only
C2 Residential Institutions	+98 dwellings	Completions & Permissions Only
Student Accommodation	+332 dwellings (discounted value)	Completions & Permissions Only
Primary & Secondary Education	+9,300sqm	Completions & Permissions Only
Higher Education	+21,701qm	Completions & Permissions Only

4.4.3 In total, approximately 319,355sqm of growth is expected in the 2041 Do Minimum scenario, across all land uses. A growth of 12,875 dwellings is expected in the 2041 Do Minimum scenario.

4.4.4 In addition to this, any windfall associated with the Local Plan for the above land uses will be modelled at 2041 Do Minimum stage, for the residential land uses. A total windfall of 790

residential units will be modelled and split equally between the model zones within Portsmouth. There is no windfall for office, industrial and retail land use.

4.5 Transport/Highway Schemes

4.5.1 A list of committed transport and highway schemes included in the SRTM can be found in **Appendix C**. This includes schemes funded through streams such as the Transforming Cities Fund. A summary of the 2019 Baseline and 2041 Reference Case committed schemes within Portsmouth is shown in **Table 7** below. Detail is provided to show which schemes are coded in the baseline, reference case or both below.

Table 7. SRTM Committed 2041 Reference Case Transport & Highway Schemes – Summary

Scheme	Description	Included in 2019 Baseline	Included in 2041 Reference Case
Bus Route Changes	Routes 1,3, 8, 18, 20, 23, 700	Y	Y
Signal Timing Changes	A27 Southampton Rd/Port Way, Southampton Road/Paulsgrove, Anglesea Rd/Queen St, Eastney Rd/Bransbury Rd, Fratton Rd/Lake Rd, Milton Rd/Goldsmith Ave, Goldsmith Ave/Winter Rd, Kingston Rd/Kingston Crescent, M275/A27/A3, Marketway/Unicorn Rd, Mile End Rd/Trafalgar Link Rd, Milton Rd/Velder Ave, Fratton Rd/Arundel St, Copnor Rd/Norway Rd, London Rd/Southwick Hill Rd, High St (Cosham)/Spur Rd, (applied to both 2019 Baseline and 2041 Reference Case) Copnor Rd/Stubbington Avenue, Fratton Rd/Lake Rd/St Mary's Rd, Eastern Rd/Havant Rd junctions (applied to only 2041 Reference Case)	Partly - Copnor Rd/Stubbington Rd, Fratton Rd/Lake Rd/St Mary's Rd, Eastern Rd/Havant Rd junctions (applied to only 2041 Reference Case)	Y
Junction Design Changes	Milton Rd/Priory Crescent junction	N	Y
City Centre Clean Air Zone	Government mandated CAZ to be rolled out to address NOx exceedances which will charge a fee for HGV, Bus/Coach & Taxis that fall below Euro 4/6 standards.	N	Y
Southsea Sea Defences (Clarence Esplanade)	One-way westbound traffic restriction applied to Clarence Esplanade between Serpentine Rd and Clarence Pier interchange.	N	Y
Western Road (A27)	Speed limit reduction to 50mph	Y	Y
A27 Southampton Road – new	New access to north of A27 between Port Solent and Portchester, includes altered lane merge on A27	N	Y

development access			
Dundas Lane Roundabout	New arm to provide access to Admiral Lord Nelson School	N	Y
Pedestrian Crossing Schemes	Tiger crossing Fawcett Road jct/w Fratton Bridge Roundabout - included loss of flared lane at Fawcett Rd entry to roundabout; Zebra Crossing across Albert Road immediately east of junction with Francis Avenue; Traffic signal crossing Duisburg Way (approx. 90m east of roundabout at Pier Road)	N	Y
TCF Committed Schemes	Package of TCF Schemes included in Reference Case modelling	N	Y

4.5.2 It should be noted that for the purposes of the SRTM modelling, the proposed Tipner Bridge link referenced in the Local Plan has not been included in any of the modelled scenarios. The proposed bridge link is a public transport and cycle only link, hence no private vehicles will utilise this route. At the point of the assessment, no detail is available on the scheduling of new and re-routed bus services via this link and therefore the assessments presented are robust, given that in the future once the Tipner Bridge is developed the level of car trips to the Tipner area may be slightly reduced due to a level of mode shift.

4.6 SRTM Results

4.6.1 The series of figures below show data plots highlighting how delivery of the strategic sites/site allocations are expected to affect the operation of the existing highway network, extracted based on SRTM model results.

4.6.2 Flow difference plots between the Baseline (2041) and Do Minimum (2041) scenarios comprise the following:

- Link Flows – presents the additional traffic flows in Passenger Car Units (PCU) along each link of the network (increase of 50 vehicles or more presented).
- Additional Delay incurred along each link of the network (seconds) (increase of 10 seconds or more presented).

4.6.3 By examining this data it is possible to identify both how traffic patterns are expected to change generally as a result of the presence of additional development traffic, and where these diversion effects on both “new” and existing traffic have the potential to lead to issues with congestion, or to increase traffic flows in locations where it would be preferable to constrain such growth (such as for the purposes of encouraging more non-motorised travel). The pink lines on the plots represent increases and the blue lines represent decreases.

4.6.4 Absolute plots for the Do Minimum (2041) scenario comprising the following:

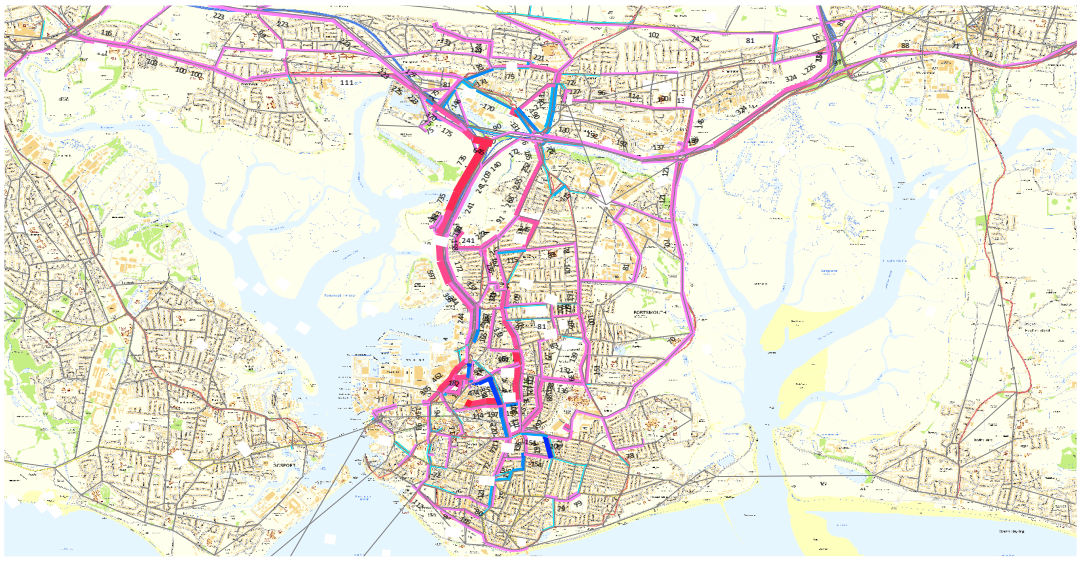
- Volume/Capacity Ratio – shows the absolute V/C ratio for links >50 (capacity on each link).

4.6.5 A full set of the plots from these exercises (at full page size) are included at **Appendix D**.

4.7 AM Peak Data Plots

Link Flow Difference Plot

Figure 3. AM Peak Link Flow Difference – 2041 Baseline vs 2041 Do Minimum

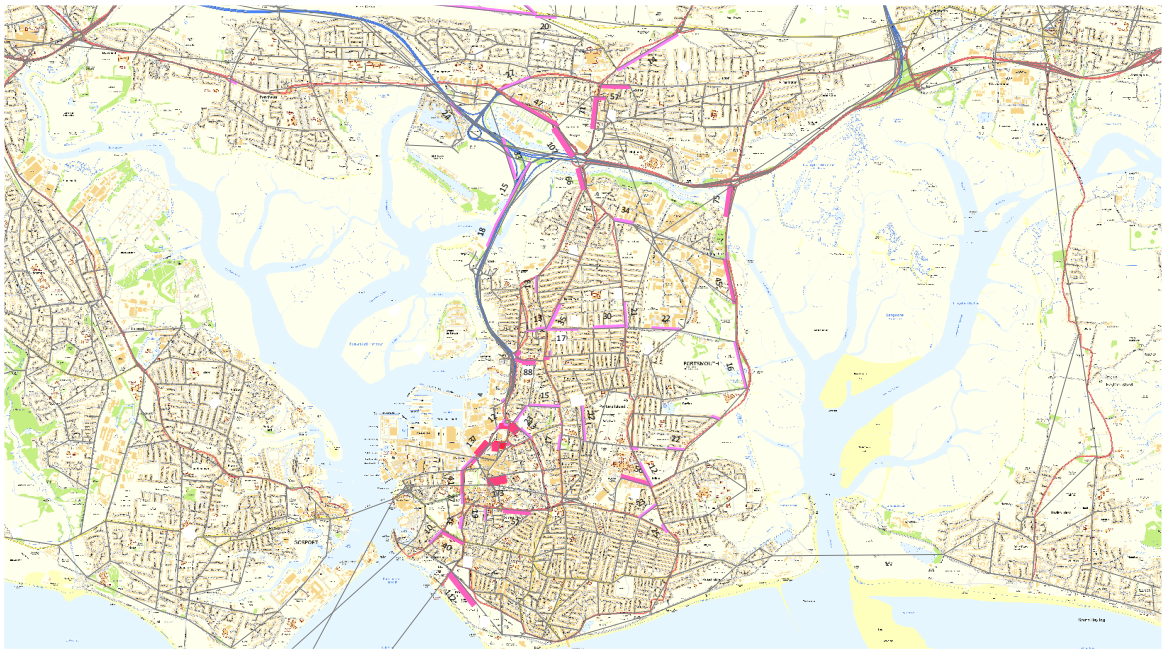


4.7.1 **Figure 3** identifies the following:

- Three key flow entries/exits to and from the Portsmouth network:
  - 1) M275 towards Tipner in the west section of network
  - 2) A3 via Hilsea towards City Centre
  - 3) A2030 towards eastern zones
- Large increase in flow on the M275 corridor northbound to the M27 – 645 additional westbound and 90 additional eastbound flows via slip roads.
- Net reduction of trips at Portsbridge Roundabout/ on A27, likely due to the congestion at the Lakeside access and therefore vehicles using the M275 and A2030 as alternatives. Additional trips are observed at the A2030 Eastern Road/Havant Bypass junction including 55 additional trips from the eastbound off-slip and 4 additional trips from the westbound off-slip. There are 69 additional trips to the westbound on-slip and 188 additional trips to the eastbound on-slip.
- There is an increase in flows using the M275 (735 travelling northbound), largely due to the strategic sites of Tipner East and West accessed from M275 J1.
- Up to 268 additional trips on the A3 Northern Parade northbound. This is likely associated with traffic from the City Centre strategic sites.
- Elements of re-routing and a net reduction of trips within the City Centre, assumed due to congestion associated with an increase in trips from the City Centre development.

Delay Difference Plot

Figure 4. AM Peak Delay Difference – 2041 Baseline vs 2041 Do Minimum

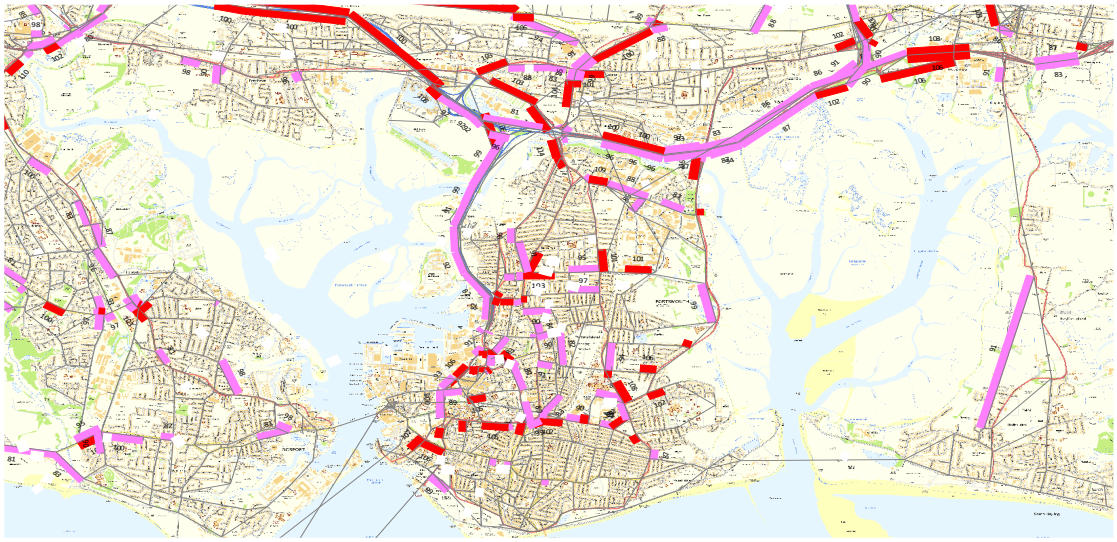


4.7.2 **Figure 4** identifies the following:

- Increased delay on Lakeside roundabout (107 seconds), which is resulting in re-routing away from Portsbridge roundabout, due to increased congestion on the A27 Western Road southbound.
- Minimal delay impacts on the M275, despite increases in flows.
- Increased delay at the A2030 Eastern Road/Havant Bypass junction (75 seconds) due to increased flows.
- Minimal increased delays in the City Centre. 173 second delay noted near Portsmouth and Southsea station due to this junction being committed to be upgraded to a signalised junction (coded in the 2041 Do Minimum) resulting in delays upon approach to the stop line, compared to the current give way arrangement and additional trips from the City Centre strategic site.

V/C Absolute Plot

Figure 5. AM Peak V/C Absolute Plot – 2041 Do Minimum



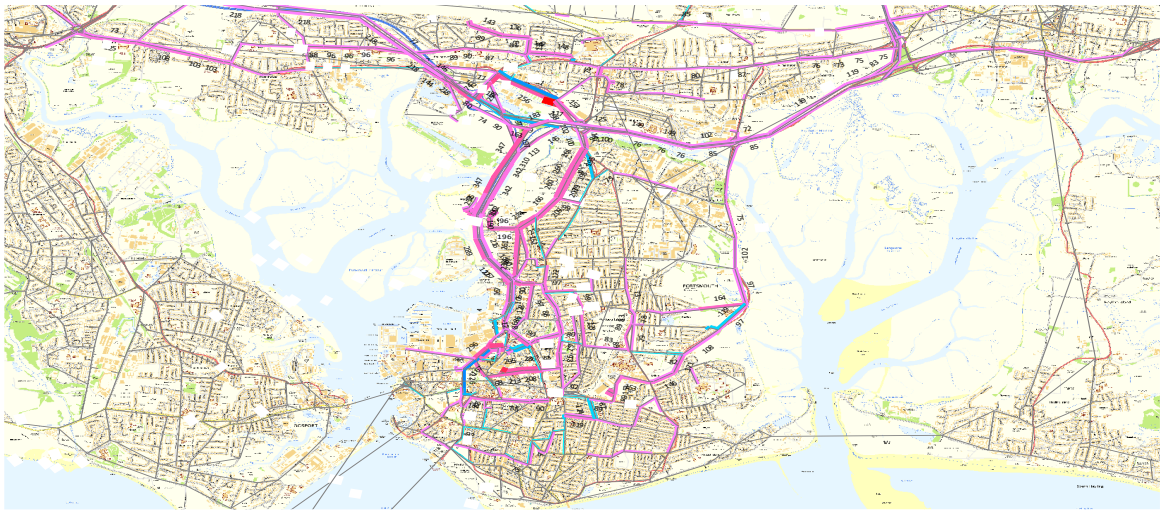
4.7.3 **Figure 5** identifies the following:

- There is no material change in V/C along the SRN mainline between the 2041 Baseline and 2041 Do Minimum scenario (M27 V/C increases from 99 to 100).
- High levels of V/C are observed on approach to the Lakeside access roundabout, form both the northbound and southbound directions of A27 Western Road.
- The V/C on the M275 increases to 99 for vehicles travelling southbound in the 2041 Do Minimum scenario, with it being 92 in the 2041 Baseline scenario. This results in a V/C increase of 7 however the SRN is still operating within capacity. The increase in V/C using the A2030 Eastern Road southbound is only 1 between the 2041 Baseline and Do Minimum.
- Several junctions around/in the City Centre are forecast to operate over capacity due to increased flows from City Centre strategic site.

4.8 PM Peak Data Plots

Link Flow Difference Plot

Figure 6. PM Peak Link Flow Difference – 2041 Baseline vs 2041 Do Minimum



4.8.1 **Figure 6** identifies the following:

- As per the AM peak, three key flow entries/exits are identified to and from the Portsmouth network:
  - 1) M275 towards Tipner in the west section of network
  - 2) A3 via Hilsea towards City Centre
  - 3) A2030 towards eastern zones
- Increase in flow on the M275 corridor to the M27 – 145 additional westbound and 197 additional eastbound flows via slip roads.
- Additional trips observed at the A2030 Eastern Road/Havant Bypass junction including 102 additional trips from the eastbound off-slip and 31 additional trips from the westbound off-slip. There are 72 additional trips to the westbound on-slip and 9 fewer trips to the eastbound on-slip.
- Additional trips on the A3 towards the City Centre – 88 additional trips southbound and 93 additional trips northbound. This is partly associated with traffic to and from the City Centre strategic site.
- Some minor re-routing of vehicles is observed within the City Centre, likely due to congestion associated with the trips from the City Centre strategic site.

Delay Difference Plot

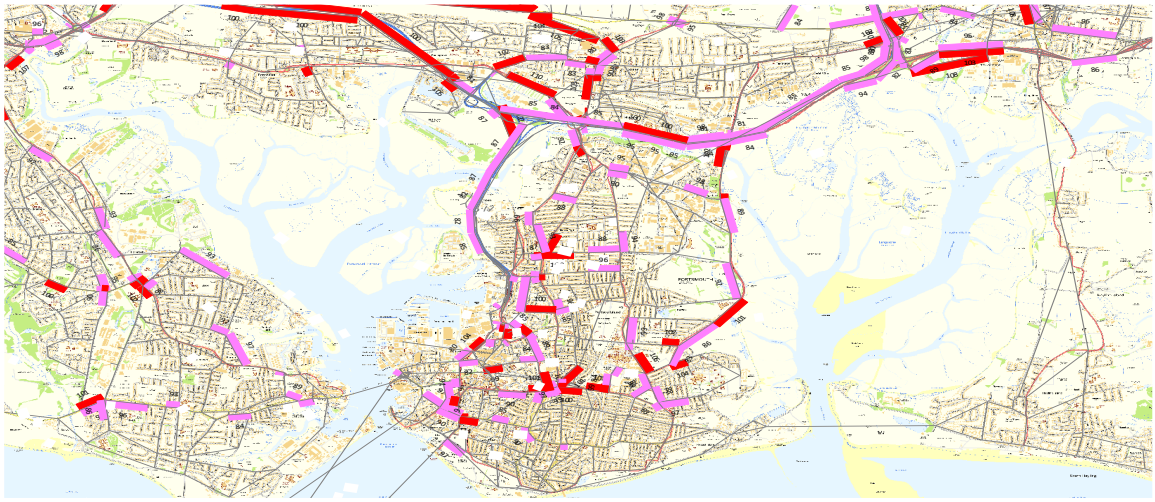
Figure 7. PM Peak Delay Difference – 2041 Baseline vs 2041 Do Minimum

4.8.2 **Figure 7** identifies the following:

- Increased delay on Lakeside roundabout (130 seconds), which is resulting in re-routing away from Portsbridge roundabout due to vehicles avoiding congestion incurred along A27 Western Road. This is due to the planned growth of the business park resulting in more trips entering and exiting via a single point of access to the strategic site.
- Minimal delay impacts on the M275, despite increases in flows.
- Minor increase in delay at the A2030 Eastern Road northbound arm on approach to the Eastern Rd/Havant Bypass roundabout due to increased flows (23 seconds).
- Minimal increased delays in the City Centre due to City Centre strategic site.
- High delay observed at Kings Road Roundabout (430 seconds).

V/C Absolute Plot

Figure 8. PM Peak V/C Absolute Plot – 2041 Do Minimum



4.8.3 **Figure 8** identifies the following:

- There is no material change in V/C along the SRN mainline between the 2041 Baseline and 2014 Do Minimum scenario.
- The V/C approaching Portsbridge roundabout on the A27 Western Road southbound is 110. This is attributed to the increase in flows associated with the Lakeside strategic site, and also linked to the congestion and delay observed on this link. In the 2041 Baseline, this link is operating at a 103 V/C and therefore there is an increase in V/C of 7.
- The M27 is reaching 100 V/C eastbound, however this was already operating at 99 in the 2041 Baseline. Therefore, an increase of 1 is considered negligible.
- The increase in V/C using the A2030 Eastern Road southbound is only 1 between the 2041 Baseline and Do Minimum.
- Several junctions around/in the City Centre are forecast to operate over capacity due to increased flows from City Centre strategic site.

4.9 SRTM Results Summary

4.9.1 This section has considered the impact of the Local Plan growth on the operation of the highway network, considering vehicle flow changes, delay differences and resultant changes in V/C at junctions and key links. Notable findings from the modelling review include:

- Lakeside Access – elements of rerouting in this area due to congestion caused by the Lakeside strategic site with significant growth in vehicle trips seeking to use a single point of access to/from the site. This is a particular issue in the PM peak;
- Portsbridge roundabout – elements of rerouting and delay at this roundabout due to the increased flow and congestion from the Lakeside roundabout. Vehicles are observed using alternative routes such as the M275 to enter the City Centre, due to the congestion at Portsbridge.

- City Centre- the City Centre strategic site increases traffic flows in the area, which causes congestion and delays and subsequent re-routing from impacted junctions.

4.9.2 The next chapter of the STA provides detail on the methodology used for the Localised Junction Modelling of key areas of congestion, as identified from the SRTM modelling results and plots above.

5 LOCAL JUNCTION MODEL METHODOLOGY

5.1 Category 1 Junctions

5.1.1 Based on the SRTM results above, junctions for further consideration have been classified as experiencing either a "severe" or "significant" impact in the 2041 Do Minimum scenario (with Local Plan growth), based on the following criteria – the junctions have to meet all the stated criteria to be classified as severe or significant. Severe junctions will be those taken forward for further investigation and potential mitigation (known as Category 1 junctions).

- **Severe**: Volume/Capacity >95%; and Difference between the Do Minimum and Baseline V/C of at least 10%; and
- **Significant**: Volume/Capacity >85%; and Difference between the Do Minimum and Baseline V/C of at least 5%.

5.1.2 The scope of the junction assessments was agreed with PCC, prior to any modelling reviews being undertaken based on the above criteria and any clarifications regarding the impacts of severity (i.e. junctions which are particularly close to Local Plan developments may be upgraded to severe, and others downgraded to significant). A list of junctions which were upgraded and downgraded along with the reason why can be found in **Table 8** below.

Table 8. Junctions Upgraded/Downgraded

Junction Name	Justification
Portsbridge Roundabout – Upgraded from Significant to Severe	Upgraded due to the location of this junction being on a key public transport route into/out of the city and being in close proximity to the Lakeside strategic site, causing significant impacts at this junction noted in the SRTM results.
Tipner Interchange (M275 J1)- Downgraded from Severe to Significant	Only one arm (SB off-slip) has a V/C over 100% (101%), with other arms having significant capacity available in the 2041 Do Minimum scenario.
Church Street/Wingfield Street - Downgraded from Severe to Significant	Only one arm (Church Street SB) has a V/C over 100 (104%) and only on the AM peak. There is spare capacity on all other arms.
Church Street / Staunton Street - Downgraded from Severe to Significant	The Church Street SB arm has a V/C of 98% in the PM peak, and therefore is nearing but not yet over capacity. There is significant spare capacity on all other arms and limited queueing observed.
Marketway/Alfred Rd/Unicorn Rd - Downgraded from Severe to Significant	The Unicorn Road arm has a V/C of 98% in the AM peak and therefore is nearing but not yet over capacity. There is significant spare capacity on all other arms and limited queueing observed.
Anglesea Road / Alfred Road / Edinburgh Road / Queen Street - Downgraded from Severe to Significant	The Anglesea Road arm has a V/C of 97% in the AM peak and therefore is nearing but not yet over capacity. There is significant spare capacity on all other arms and limited queueing observed.

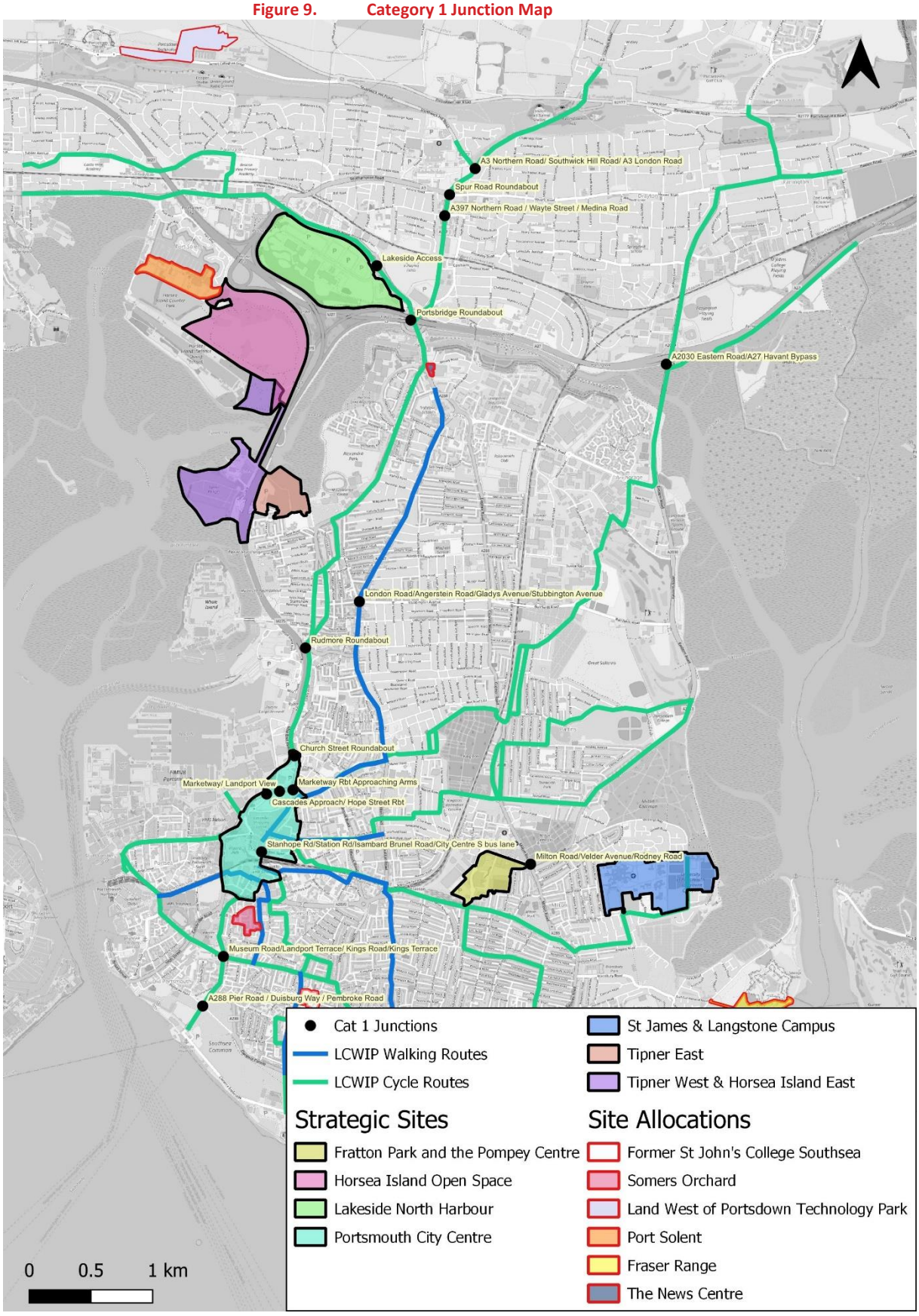
Table 9 lists the "Category 1" junctions taken forward for local junction modelling (severe junctions), whilst **Figure 9** maps these junctions in the context of the Portsmouth area and overlain with PCC proposed Local Cycling and Walking Implementation Plan (LCWiP) routes. A full scale version of this map can be found in **Appendix E**. **Table 9** lists whether the junction is within an Air Quality Management Area (AQMA) or a Clean Air Zone (CAZ).

Table 9. Category 1 Junctions

Junction ID	Junction Name	Junction Type	Modelling Software	Commentary
1	Milton Road / Velder Avenue / Rodney Road (AQMA number 9)	Signalised Crossroads	LinSig	NA
2	Portsbridge Roundabout	Unsignalised Roundabout	J10	NA
3	Spur Road Roundabout	Unsignalised Roundabout	J10	NA
4	Church Street Roundabout (CAZ)	Signalised Roundabout	LinSig	PCC have noted that this junction may be changed into a signalised crossroads as part of City Centre redevelopment.
5	London Road / Angerstein Road / Gladys Avenue / Stubbington Avenue (AQMA number 6)	Unsignalised Roundabout	J10	NA
6	Marketway Roundabout (CAZ)	Signalised Roundabout	LinSig	PCC have noted that this junction may be changed into a signalised crossroads as part of City Centre redevelopment.
7	Rudmore Roundabout (Partly in AQMA number 11)	Signalised Roundabout	LinSig	Roundabout recently widened to a two lane exit on the M275 northbound on-slip and extension of southbound bus lane from roundabout.
8	Lakeside Access	Unsignalised Roundabout	J10	NA
9	A2030 Eastern Road / A27 Havant Bypass	Signalised Roundabout	LinSig	NA
10	Stanhope Road / Station Street / Isambard Brunel Road / Commercial Road North (CAZ)	Unsignalised Roundabout	J10	PCC have noted this is due to become a signalised crossroads, with Commercial Road North still being bus only.
11	A288 Pier Road / Duisburg Way / Pembroke Road	Unsignalised Roundabout	J10	No change to existing operation in 2029 baseline, however planned one-way traffic restriction applied to Clarence Esplanade between Serpentine Rd (Aquarium) and Clarence Pier interchange in the 2041 Reference Case, 2041 Do Minimum and 2041 Do Something. Traffic will be one-way westbound.
12	A397 Northern Road / Wayte Street / Medina Road	Unsignalised Crossroads	J10	NA
13	Hope Street Roundabout (CAZ)	Unsignalised Roundabout	J10	PCC have noted that this junction may be changed into a signalised

				crossroads as part of City Centre redevelopment.
14	Marketway / Landport View (CAZ)	Signalised T-Junction	LinSig	PCC have noted that this junction will be removed as part of the City Centre redevelopment.
15	A3 Northern Road / Southwick Hill Road / A3 London Road	Signalised T-Junction	LinSig	NA
16	Museum Road / Landport Terrace / Kings Road / Kings Terrace (Junction partly in CAZ)	Unsignalised Roundabout	J10	PCC have proposed new cycling infrastructure adjacent to this roundabout.

Figure 9. Category 1 Junction Map



5.2 Local Junction Modelling Scenarios and Software

5.2.1 The following scenarios have been assessed:

- Scenario 1: 2019 Base - Current SRTM Base Model
- Scenario 2: 2041 Baseline - No Local Plan development within Portsmouth except for committed sites
- Scenario 3: 2041 Do Minimum - Full Local Plan development without transport mitigation
- Scenario 4: 2041 Do Something - Full Local Plan development with transport mitigation

5.2.2 Priority-controlled (unsignalised) junctions have been modelled using Junctions 10, whilst LinSig v3 has been used for modelling the signal-controlled junctions, and the partially signalised junctions. Junction geometries have been measured based on OS data, as shown on the geometry drawings in **Appendix F.** Signal timing sheets were provided for all signalised junctions identified, which were used to set up the LinSig models. The signal timing data sheets can be provided upon request.

5.2.3 The junction flows for each scenario have been ascertained from turning count output plots from the SRTM Model.

Junction 10 Output Definitions

5.2.4 The Junctions 10 modelling software uses empirical formulae based on traffic flows and junction geometries to calculate the capacity of non-priority traffic streams (streams that must give-way to priority traffic). Geometric measurements include lane width available to the non-priority stream, visibility to waiting drivers, and width of the major road. Angles of Intercept are also calculated for roundabout junctions.

5.2.5 The key outputs from Junctions 10 are the "ratio of flow to capacity" (RFC) and the mean and maximum queue lengths. An RFC of 0.85 or less on all arms indicates that a junction is functioning well without significant delay on any arm. An RFC of 0.85 to 1.0 indicates that the junction will be busy and may experience intermittent delays; different junction arms can have different RFCs so a single arm with an RFC in this range may not present an issue, particularly if this is observed in only a limited period of the modelled time. An RFC of greater than 1.0 indicates that the given arm(s) are operating beyond their nominal capacity, and extended queuing would be expected on a regular basis. Once a junction has reached nominal capacity, the model is more sensitive to minor changes to traffic flows and any further increase in traffic flow will cause queuing results and delays to increase exponentially.

5.2.6 The second key output from Junctions 10 is the Level of Service (LoS) of the junction. LoS is a qualitative measure used to relate the quality of traffic service. LoS is used to analyse highways by categorising traffic flow and assigning quality levels of traffic based on performance measures such as speed and density. LoS references include:

- A = Free flow;
- B = Reasonably free flow;
- C = Stable flow;
- D = Approaching unstable flow;

- E = Unstable flow; and
- F = Forced or Breakdown Flow.

LinSig v3 Output Definitions

5.2.7 The outputs of LinSig include the Degree of Saturation (DoS), Mean Maximum Queue (MMQ) and the Delay (s).

5.2.8 The % DoS is a ratio of demand to capacity for each traffic phase. Although not formally specified within any recognised guidance, it is generally preferred to seek to maintain the overall junction's % DoS below 85% to provide a level of confidence that the junction will operate within capacity even if day-to-day traffic flows vary. If the DoS for a given arm of the junction does exceed 100%, then queues will build up during red signal periods which will be unable to fully dissipate within the next green signal period and will therefore gradually become longer and longer during subsequent cycles, until the demand from traffic arriving at that arm of the junction subsides.

5.3 Local Junction Model Validation and Calibration

5.3.1 The local junction models have been validated using the 2019 base outputs from the SRTM, as the strategic model has undergone an extensive process of model validation across links and cordons using 2019 base survey data and 2021 survey data where received from the Council. It is noted that for a few junctions, The survey data has been provided by the Council and this has therefore been used for validation purposes instead of the SRTM.

5.3.2 The methodology of the validation exercise is to use the outputs from the validated SRTM model/ surveys to ensure that the 2019 base results from the strategic model are comparable with the 2019 base local junction model outputs. In doing so we can use the validated base local junction models to forecast the future scenarios.

5.3.3 The following criteria has been used to determine compliant thresholds for validation:

- **For non-signalised junctions**, model validation is required when either the SRTM outputs or the local junction model initial outputs are reporting a mean maximum queue length of 5PCUs or more AND the queue difference on the relevant arm is ±3PCUs or more. Validation only occurs on arms of each junction which meet the criteria above. A non-signalised local junction model is considered validated if the queue lengths reported within the local junction model for the impacted arms are within ±5PCU of the comparable SRTM output results;
- **For signalised junctions,** a local junction model is considered validated if the Volume to Capacity (v/c) SRTM metric compared with the local junction Degree of Saturation are within ±15 percentage points on all arms.

5.3.4 The amendments to the junction model for validation typically include changes to saturation flows, give way parameters, cycle times and bonus greens within signalised junctions. It is noted that saturation flow adjustments for signalised junction have been undertaken within a reasonable range, with an upper limit of 2200 and a lower limit of 1400 to ensure a robust calibration exercise showing realistic changes.

5.3.5 Direct percentage capacity adjustments have been made to non-signalised models for validation where necessary.

5.3.6 By achieving the required model validation criteria, the base models can be used to forecast the future scenarios to assess the impact of local growth and the Local Plan developments. Details regarding the model calibration and validation changes are provided at the start of the results section for each of the Category 1 junctions within the next Chapter of this STA.

6 LOCAL JUNCTION IMPACT ASSESSMENT

6.1 Overview

6.1.1 The results of the local junction assessment are presented for the Category 1 junctions in this chapter. For the LinSig models, it is noted that the results presented show the junction after an initial signal optimisation of the base model, with saturation flows amended for validation purposes.

6.1.2 Full model output reports for the Category 1 junction assessments can be made available upon request.

6.1.3 It is noted that Junction 4 (Church Street Roundabout)/ Junction 6 (Marketway Roundabout and Junction 13 (Hope Street Roundabout) are all within the City Centre Road Scheme; and are discussed together at the end of this chapter.

6.2 Junction 1- Milton Road / Velder Avenue / Rodney Road / Alverstone Road

6.2.1 This junction is a five arm signalised crossroads comprising A288 Milton Road North/ A2030 Velder Avenue/ A288 Milton Road South/Alverstone Road and A2030 Rodney Road. The junction is within the residential area of Milton.

6.2.2 Velder Avenue has a two-lane left turning bypass to Milton Road South. Alverstone Road only provides access to Rodney Road through a left turning bypass, and does not directly provide entry to the crossroads. Rodney Road has one lane left turn bypass lane to Milton Road North. Signalised pedestrian crossings with tactile paving and dropped kerbs are present on all arms.

Model Validation

6.2.3 The junction model degree of saturation values were validated against available SRTM volume over capacity data. **Table 10** details the amendments which have been made to the saturation flows on the junction model arms to allow validation to meet the required criteria detailed in **Section 5.3.3.** Applying an increase in saturation flow indicates that more vehicles can pass through a signal in any given hour, whilst applying a decrease in saturation flow indicates less vehicles can pass through a signal in any given hour when compared to a non-validated junction model. Where a lane is not shown in the table no validation adjustments have been made.

6.2.4 Note that Alverstone Road is not modelled in the strategic model and therefore no validation was undertaken.

Table 10. Junction 1 – Local Model Validation Amendments

ARM	Lane	Previous Sat Flow	Amended Sat Flow
A – Milton Road North	1- Nearside	1905	AM & PM Peak: 2200 (+295)
	2- Offside	2027	AM & PM Peak: 2200 (+173)
B – Velder Avenue	1- Nearside	1740	AM & PM Peak: 2200 (+460)
	2 - Middle	1785	AM & PM Peak: 2200 (+415)
	3- Offside	2001	AM & PM Peak: 2200 (+199)
C – Milton Road South	1- Nearside	1912	AM & PM Peak: 2200 (+288)

	2- Offside	1918	AM & PM Peak: 2200 (+282
D – Rodney Road	1- Nearside	1959	AM & PM Peak: 2200 (+241
	2- Offside	1960	AM & PM Peak: 2200 (+240)

6.2.5 The table above shows a capacity adjustment was required to better align with the SRTM volume over capacity data on a number of lanes. The highest increase in saturation flow was required on Velder Avenue for the nearside lane. This change in saturation flows allows the junction model to have a degree of saturation as close as possible for each arm to the SRTM.

6.2.6 Despite this all arms DoS has not reached the criteria of being 15 percentage points higher or lower than the SRTM data, with calibration adjustments undertaken based on a reasonable range (saturation flow upper limit 2,200). No further validation is required as this is noted as a robust adjustment as the V/C is higher in the junction model compared to the SRTM results, and any further adjustments not being representative and noted as excessive.

Model Results

6.2.7 The junction in its existing layout has been modelled using LinSig software, with the results shown in **Table 11** . It is noted that Alverstone Road has no data associated with the junction model, this is due to it not being shown in the SRTM and no flows to extract. As Alverstone Road does not have any arms which enter the crossroads, this does not impact junction operation.

Table 11. Junction 1 – Existing Layout Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	**Delay (s)**	**DOS**	**Queue (PCU)**	**Delay (s)**	**DOS**
2019 Base						
A – Milton Road North	37.6	419.2	121.5	45.5	419.8	122.0
B – Velder Avenue	32.5	366.3	117.4	18.9	160.1	102.0
C – Milton Road South	61.7	337.1	117.2	46.6	342.7	117.0
D – Rodney Road	51.5	379.5	120.3	53.3	293.6	114.5
E- Alverstone Road	NA	NA	NA	NA	NA	NA
2041 Baseline						
A – Milton Road North	52.3	591.1	136.8	64.0	520.1	130.9
B – Velder Avenue	16.1	146.4	100.2	58.1	477.2	127.4
C – Milton Road South	116.1	597.4	140.0	79.3	566.9	136.5
D – Rodney Road	95.1	554.0	136.2	98.6	465.4	129.0
E- Alverstone Road	NA	NA	NA	NA	NA	NA
2041 Do Minimum						

A – Milton Road North	54.0	604.6	138.2	81.0	655.1	144.2
B – Velder Avenue	23.4	221.4	106.7	100.6	648.0	144.5
C – Milton Road South	122.2	620.8	142.3	103.7	725.0	153.3
D – Rodney Road	105.4	593.4	140.3	84.1	374.2	121.3
E- Alverstone Road	NA	NA	NA	NA	NA	NA

6.2.8 The results show the following:

- 2019 Base Scenario:
  - All the four arms assessed are over capacity in the AM and PM peak.
  - Queueing exceeding stacking space and high delays is an issue for all these arms.

- 2041 Baseline:
  - All the four arms assessed are over capacity in the AM and PM peak.
  - Milton Road South has the highest DoS at 140.0% in the AM peak, resulting in a queue of 116.1 PCU (668m). There is 257m available to the next major junction (Milton Road/Priority Crescent), therefore the queuing exceeds the stacking space present. There are a number of residential minor roads in between both junctions, where queuing can cause further delays for vehicles trying to turn into Milton Road.

- 2041 Do Minimum:
  - All the four arms assessed are over capacity in the AM and PM peak.
  - Milton Road South has the highest DoS at 153.3% in the PM peak, resulting in a queue of 103.7 PCU (596m). There is 257m available to the next major junction (Milton Road/Priority Crescent), therefore the queuing exceeds the stacking space present.
  - Queueing exceeding stacking space and high delays is an issue for all these arms.

6.2.9 The results show that the junction was already operating over capacity in the 2019 Base year, and 2041 Baseline. The majority of DoS increases between the 2041 Baseline and 2041 Do Minimum scenarios are minor in the AM peak. The highest increase in the DoS in the PM peak between the 2041 Baseline and 2041 Do Minimum scenario is 17% on Velder Avenue. However, there is a slight decrease in DoS on Rodney Road in the PM peak when comparing the same scenarios. Overall, this junction is already experiencing congestion issues on ground in the base year, and both committed development and Local Plan growth DoS further contribute to congestion increases.

6.2.10 Upon review of this junction, SYSTRA note that this junction is already heavily engineered for optimum capacity with multiple lanes, feeder lanes, signals and limited provision for other modes. SYSTRA previously undertook a junction modelling assessment in 2015, which also showed that the junction was operating above capacity in a 2015 baseline scenario.

Consequently, with both the 2015 Base and 2019 Base scenarios already showing that the junction is operating above capacity and the junction already being heavily engineered with limited possibility for further improvements, no further physical mitigations are proposed.

6.2.11 Any future approach to alleviating congestion at this junction will have to focus on non-physical interventions such as supporting measures to support mode shift (i.e. bus priority), given that this junction is already heavily engineered.

6.3 Junction 2 – Portsbridge Roundabout

6.3.1 Portsbridge Roundabout is a four arm unsignalised roundabout comprising Northern Road (A397), the M27 (WB off slip roads only), London Road (A3) and Western Road (A27). The junction is a major gateway to Portsmouth, providing direct access to one of only three vehicle routes onto Portsea Island.

6.3.2 A separate bus only arm connects to the roundabout directly adjacent to the Northern Road (A397) entry. Bus lanes are provided on the east, south-east and south-west sections of roundabout circulatory. Segregated bypass lanes are present for the Western Road to Northern Road and M27 westbound off slip to London Road movements. In addition, a segregated bus-only lane enables buses to bypass the London Road give-way roundabout entry and join the roundabout circulatory 100m further to the north-west. It is noted that this junction is located on one of the major bus routes into and out of the city.

6.3.3 No pedestrian crossing points are located at this junction. An off-road shared use path making use of a series of grade-separated underpasses provide pedestrians and cyclists with a means of passing through the junction.

Model Validation

It is noted that 2019 survey data showing queue lengths was available for this junction, which has been used to validate the model. **Table 12** details the amendments (final capacity adjustment) which have been made to the junction model arms to allow validation to meet the required criteria detailed in **Section 5.3.3.** A 100% value means that no capacity adjustment has been made as junction model data closely matched survey queue data.

Table 12. Junction 2 – Local Model Validation Amendments

ARM	% Capacity Adjustment (AM &PM)
A – Northern Rd A397 N	85% (-15%)
B – M27 WB Off Slip	150% (+50%)
C – London Rd A3	100% (No adjustment required)
D – Western Rd A27 N	160% (+60%)

6.3.4 The table above shows a capacity adjustment was required to better align with the survey data on three out of the four arms at this junction. Despite undertaking the capacity adjustments, it is of note that Arm D in particular forecasts a disproportionally high level of queueing in the junction model compared to the 2019 queue data. Through the capacity adjustment, not all junction model arms reached a threshold of being within a +/- 5 PCU queue length compared to the survey data through validation. However, the junction model results represent a worst case scenario for Arm D, and therefore provides a robust set of existing results.

Existing Layout Results

6.3.5 The junction in its existing layout has been modelled using Junctions 10 software, with the results shown in **Table 13**.

Table 13. Junction 2 – Existing Layout Results

	AM (08:00-09:00)				PM (17:00-18:00)			
	Queue (PCU)	Delay (s)	RFC	LoS	Queue (PCU)	Delay (s)	RFC	LoS
2019 Base								
A – Northern Rd A397 N	17.6	42.60	0.96	E	17.9	39.47	0.96	E
B – M27 WB Off Slip	25.4	59.88	0.99	F	26.6	61.46	1.00	F
C – London Rd A3	5.1	9.20	0.82	A	3.0	5.67	0.73	A
D – Western Rd A27 N	52.4	132.18	1.07	F	225.4	519.68	1.33	F
2041 Baseline								
A – Northern Rd A397 N	15.3	36.81	0.95	E	10.1	23.81	0.91	C
B – M27 WB Off Slip	75.7	146.00	1.09	F	153.9	338.97	1.21	F
C – London Rd A3	7.7	12.91	0.88	B	3.3	5.64	0.75	A
D – Western Rd A27 N	97.9	240.90	1.16	F	431.5	989.34	1.51	F
2041 Do Minimum								
A – Northern Rd A397 N	10.6	27.68	0.92	D	12.1	28.03	0.93	D
B – M27 WB Off Slip	32.4	70.39	1.01	F	226.4	547.37	1.32	F
C – London Rd A3	16.1	25.35	0.95	D	3.9	6.26	0.78	A
D – Western Rd A27 N	80.2	231.86	1.16	F	518.3	1118.90	1.55	F

6.3.6 The results show the following:

- 2019 Base Scenario:
  - The Western Road arm is operating over capacity with an RFC value of 1.07 and 1.33 in the AM and PM peak respectively and a resulting PM peak queue of 225 PCUs.
  - The M27 westbound off slip arm operates at capacity with a maximum RFC value of 1.00 in the PM peak. This results in a queue of 27 PCUs which fits within the stacking space available on the slip road.
- 2041 Baseline:
  - The Western Road arm PM peak RFC increases to 1.51, resulting in a queue of over 430 PCUs.
  - The M27 westbound off slip arm PM peak RFC increases to 1.21 resulting in a queue of 154 PCUS (886m, which would extend back to and impact the operation of the mainline, due to 447m slip road length available).
- 2041 Do Minimum:
  - The Western Road arm PM peak RFC increases to 1.55 resulting in a queue of 518 PCUs.

- The M27 westbound off slip arm PM peak RFC increases to 1.32 resulting in a queue of 226 PCUs, an increase of 72 PCUs when compared to the 2041 baseline.

6.3.7 Portsbridge Roundabout therefore operates significantly over capacity in the 2041 Baseline scenario, with the Western Road arm having a maximum RFC of 1.51 and the M2 westbound off-slip having a maximum RFC of 1.21. With the addition of the Local Plan development, the 2041 Do Minimum scenario shows there is a minor increase in RFC on both arms of 0.04 and 0.11 respectively. This suggests that generally the junction experiences significant congestion in the 2041 Baseline, which is contributing to additional delay through the junction to a much greater extent than the Local Plan traffic itself.

Mitigation Options & Results

6.3.8 Following the assessment of the performance of the existing Portsbridge Roundabout, a series of mitigation options have been investigated. This has been discussed with both PCC and National Highways, with the junction being located on the SRN. There were three options considered for mitigation, the results below show the preferred option in detail and provides a high-level overview of the other options considered. **Appendix G** contains a Technical Note SYSTRA has produced for National Highways, further detailing the impact of all options on the SRN.

6.3.9 All mitigation drawings associated with Portsbridge Roundabout can be found in **Appendix H**.

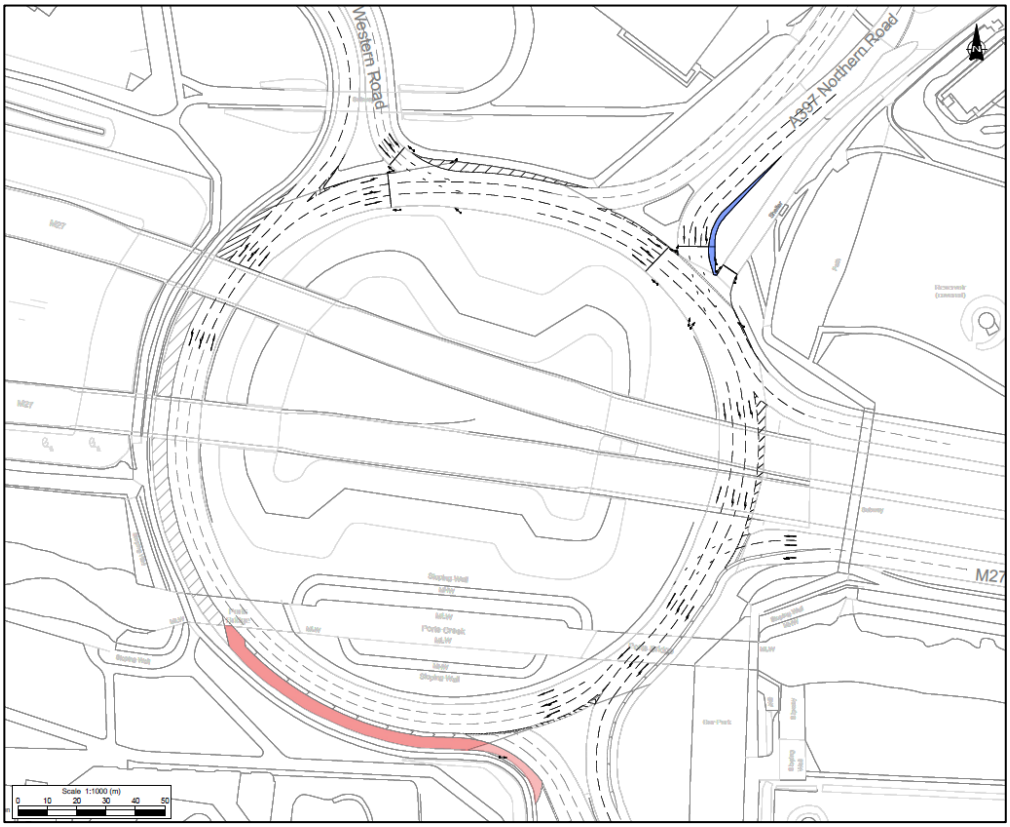
Preferred Option

6.3.10 The preferred option (**Figure 10**, drawing GB01T23C11-dwg-100-02.5 in **Appendix H**) comprises the following:

- Signalisation of A397 Northern Road arm, bus gate and opposing circulatory;
- Signalisation of Western Road arm and opposing circulatory;
- Removal of the left turn slip from A27 Western Road to help provide additional internal circulatory capacity;
- Creates enough gaps for M27 Westbound off -slip to not be congested;
- A 45 second cycle time in model; and
- Bus gate is called every other cycle.

6.3.11 It is noted that the shared use walking and cycling route linking A27 Western Road to A3 London Road is listed as a development route within the LCWIP. This route will be included within the development of this mitigation option.

Figure 10. Portsbridge Roundabout Preferred Mitigation



6.3.12 The junction in its preferred layout has been modelled using LinSig, with the results shown in **Table 14.**

6.3.13 The 2041 Do Minimum flows have been used to assess the proposed mitigation.

Table 14. Portsbridge Preferred Mitigation Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	MMQ (PCU)	Delay (s/PCU)	DoS	MMQ (PCU)	Delay (s/PCU)	DoS
2041 Do Something						
A – Northern Rd A397 N	11.0	46.5	97.9%	15.4	52.0	95.5%
B – M27 WB Off Slip	3.3	3.7	56.7%	3.1	5.2	56.1%
C – London Rd A3	1.2	3.1	70.1%	1.5	3.6	74.9%
D – Western Rd A27 N	25.3	198.2	106.7%	19.9	86.2	99.0%

6.3.14 The results show that the M27 Westbound off-slip operates with a substantially decreased DoS compared to the 2041 Do Minimum scenario under the existing layout, with a 44% V/C decrease in the AM peak and a 76% V/C decrease in the PM peak. There is minimal queueing

on this arm in both peak periods, which can be easily accommodated within the available stacking space.

6.3.15 Western Road operates above capacity in the AM Peak (106.7%) and near capacity in the PM peak (99%). There is 25.3 PCU (145m) and 19.9 PCU (114m) worth of queueing present on this arm respectively, but 360m of stacking space available to the next major junction (Lakeside access); therefore these queues can be easily accommodated). Northern Road is nearing capacity in both the AM and PM peaks, however the queueing is minimal (15.4PCU, 88m maximum) compared to 100m worth of stacking space available.

6.3.16 Therefore, this mitigation has been taken forward to support the Local Plan growth as it offers very significant improvements on junction operation compared to the existing layout and successfully mitigates any impact on the SRN. The mitigation scheme still looks to support bus priority by provision of a signalised bus gate from Northern Road, which is called every other cycle in the modelling and bus priority from A3 London Road south arm.

Other Options Considered

6.3.17 The other options considered are described in **Table 15** below. The table shows high level junction modelling results of these options alongside associated drawing number in **Appendix H**.

Table 15. Portsbridge Roundabout Other Mitigation Options

Description	Results	Appendix H Drawing
• **Signalisation of all arms and opposing circulatory** • **A 45 second cycle time within the model.**	• Northern Road and M27 westbound off-slips operating over capacity in both the AM and PM peaks. Western Road operating above capacity in the PM peak; • MMQ of up to 56.5 PCUs (325m) on M27 westbound off-slip which would fit within the stacking space available (360m); and • 2041 DM PM MMQs of up to 32.1 PCUs (185m, with 100m stacking space available) on Northern Road present and hence exceeding stacking space available, in order to prevent circulatory stacking space being exceeded. •	GB01T23C11-dwg-100-02.3
• **Signalisation of the Northern Road arm, associated bus gate and opposing circulatory.** • **A 45 second cycle time within the model.**	• Northern Road operates above capacity in the AM and PM peak; • MMQ of up to 58 PCUs (334m) on Northern Road, exceeding the 100m stacking space available; • Signalisation of Northern Road intended to create enough gaps in the opposing flow to avoid the building up of queues on the M27 westbound off -slip arm; and • Queue lengths exceed stacking space on the northern circulatory, between Western Road and Northern Road. There are up to 12.7 PCU (73m) of vehicles queueing, and 44m worth of	GB01T23C11-dwg-100-02.1

	stacking space available (in the 2041 Do Minimum PM scenario).	

6.3.18 Both options above do not operate as well as the preferred option, based on the results noted. Whilst these options have been tested, it is concluded that these two options are not 'preferred' to be taken forward as mitigation for the expected impacts of the Local Plan.

6.4 Junction 3 - Spur Road Roundabout

6.4.1 Spur Road Roundabout is a four arm unsignalised roundabout located to the north of the city, comprising the A3 Northern Road, Spur Road, A397 Northern Road and A3 Southampton Road. The junction is formed of a three-lane circulatory, alongside three entry lanes associated with each arm.

6.4.2 There are zebra crossings located on the A3 Northern Road arm and the Spur Road arm. An on-road cycle lane is located on the Southampton Road arm for westbound traffic. A series of underpasses are present at this junction for pedestrians and cyclists to travel across the junction.

Model Validation

6.4.3 The junction model was validated against available SRTM queue data. **Table 16** details the amendments (final capacity adjustment) which have been made to the junction model arms to allow validation to meet the required criteria detailed in **Section 5.3.3.** A 100% value means that no capacity adjustment has been made as junction model data closely matched SRTM data.

Table 16. Junction 3 – Local Model Validation Amendments

ARM	% Capacity Adjustment (AM &PM)
A – A3 Northern Rd	100% (No adjustment required)
B – Spur Road	100% (No adjustment required)
C – A397 Northern Road	100% (No adjustment required)
D – A3 Southampton Rd	130% (+30%)

6.4.4 The table above shows a capacity adjustment was required to better align with the SRTM queue data on one of the four arms at this junction. Based on providing 30 percentage points of additional capacity on Arm D, the junction model queue lengths and SRTM queue lengths matched within a +/- 5 PCU value. No further validation was required, with all junction model queue lengths being within a +/-5 PCU value of SRTM queue lengths following the capacity adjustment on Arm D.

Existing Layout Results

6.4.5 The junction in its existing layout has been modelled using Junctions 10 software, with the results shown in **Table 17.**

Table 17. Junction 3 – Existing Layout Results

	AM (08:00-09:00)				PM (17:00-18:00)			
	Queue (PCU)	Delay (s)	RFC	LoS	Queue (PCU)	Delay (s)	RFC	LoS
2019 Base								
A – A3 Northern Rd	2.9	8.35	0.72	A	2.1	7.85	0.66	A
B – Spur Road	1.5	7.09	0.57	A	0.7	4.12	0.37	A
C – A397 Northern Road	1.9	5.56	0.62	A	1.6	4.19	0.58	A
D – A3 Southampton Rd	0.8	2.59	0.41	A	2.4	5.24	0.69	A
2041 Baseline								
A – A3 Northern Rd	11.5	31.64	0.93	D	4.2	14.23	0.80	B
B – Spur Road	5.4	23.09	0.84	C	1.2	5.31	0.52	A
C – A397 Northern Road	4.7	11.66	0.81	B	2.3	5.90	0.67	A
D – A3 Southampton Rd	1.8	4.27	0.61	A	3.1	7.18	0.74	A
2041 Do Minimum								
A – A3 Northern Rd	16.9	43.61	0.96	E	6.1	21.32	0.86	C
B – Spur Road	4.7	21.77	0.82	C	1.7	7.12	0.62	A
C – A397 Northern Road	4.8	11.31	0.81	B	2.9	6.93	0.72	A
D – A3 Southampton Rd	1.8	4.25	0.61	A	3.9	8.81	0.78	A

6.4.6 The results show the following:

- 2019 Base Scenario:
  - No arms are operating over capacity in either the AM or the PM peak.
  - The A3 Northern Road arm has the highest RFC out of all arms, with an RFC value of 0.72 and 0.66 in the AM and PM peak respectively and resulting AM and PM peak queues of 2.9 and 2.1 PCUs respectively.
- 2041 Baseline:
  - The A3 Northern Road arm AM peak RFC increases to 0.93, resulting in a queue of 11.5 PCUs.
  - All arms operate with a RFC under 100%.
- 2041 Do Minimum:
  - The A3 Northern Road AM peak RFC increases to 0.96 resulting in a queue of 16.9 PCUs, an increase of 5.4 PCUs when compared to the 2041 Baseline. The PM peak RFC increases to 0.86, resulting in a queue of 6.1 PCUs, an increase of 1.9 PCUs when compared to the 2041 Baseline.
  - All arms operate with a RFC under 100%.

6.4.7 Whilst all arms operate within capacity, the highest increases in RFC are observed between the 2019 Baseline and the 2041 Baseline scenarios, with an observed RFC increase on A3 Northern Road of 0.21 in the AM and 0.14 in the PM. With the addition of the Local Plan development, the 2041 Do Minimum scenario shows there is a minor increase in RFC when compared to the 2041 Baseline scenario; on the A3 Northern Road there is 0.03 increase in the AM peak and a 0.06 increase in the PM peak. It is noted that whilst all arms operate

within capacity in all scenarios, the junction is set to experience more congestion in the 2041 Baseline compared to the 2019 Base. This suggests that generally the junction experiences significant congestion in the 2041 Baseline, which is contributing to additional delay through the junction to a much greater extent than the Local Plan traffic itself.

Mitigation Options & Results

6.4.8 It is noted that whilst this junction operates within capacity, PCC has noted a major safety concern at this junction based on a high level of traffic collisions (17 incidents in the last three years, including three serious incidents). A number of these incidents involved a cyclist, and therefore any mitigation at this junction should consider cyclist priority and safety. It is noted that this junction forms part of an LCWIP route.

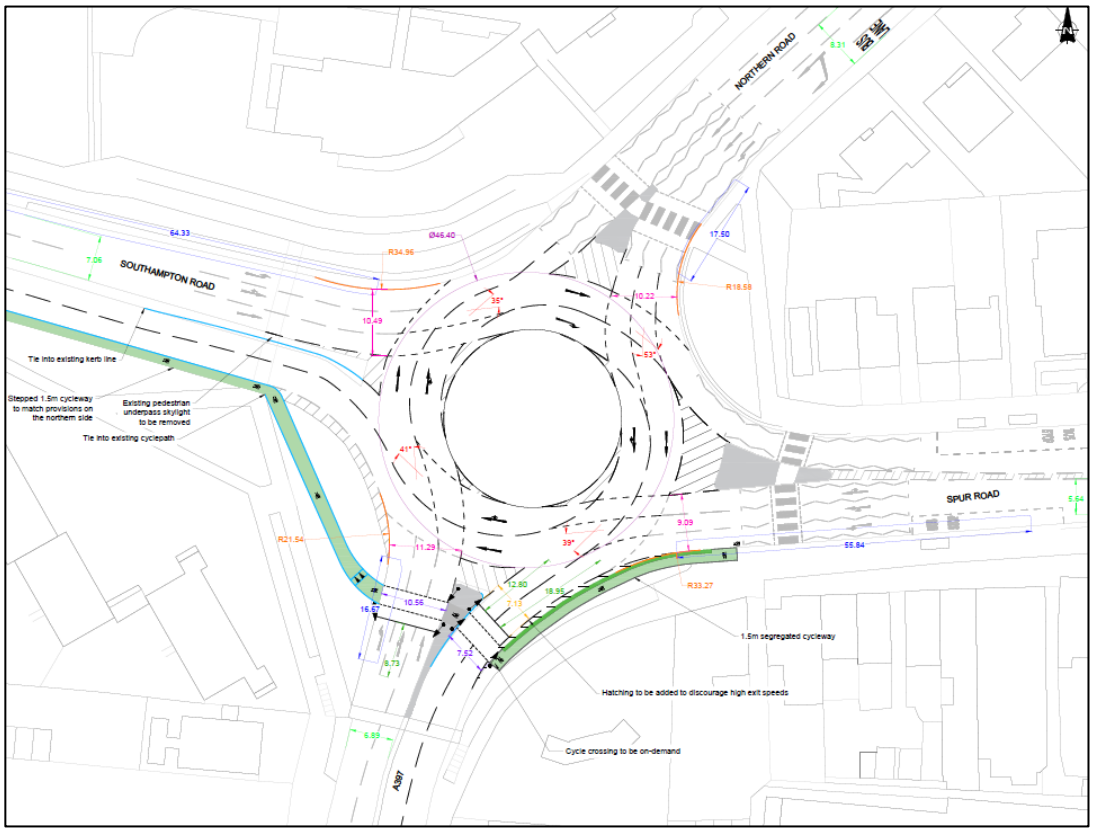
6.4.9 There were two options considered for mitigation, the results below show the preferred option in detail and provides a high-level overview of the other options considered.

Preferred Option

6.4.10 The preferred option (**Figure 11**, drawing GB01T23C11-dwg-101-03.2 in **Appendix H**) comprises the following:

- Circulatory reduced to two lanes (with hatching), with-flow cycle lane added to Spur Road (segregated) and Southampton Road cycle track improved to be segregated (stepped track), with a cycle crossing on A397 Northern Road arm;
- 200 pedestrians per hour assumed on each of the Northern Road and Spur Road zebra crossings; and
- Additionally, it is recommended to improve the lighting levels in the pedestrian underpasses, to attract more pedestrians and increase perception of safety.

Figure 11. Spur Road Roundabout Preferred Mitigation



6.4.11 As there is only one signalised crossing proposed, this junction was modelled in Junctions 10. It was felt that Junctions 10 would be more appropriate and representative than LinSig in this instance. The results of the proposed mitigation is shown in **Table 18** below.

6.4.12 The 2041 Do Minimum flows have been used to assess the proposed mitigation.

Table 18. Spur Road Roundabout Preferred Mitigation Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2041 Do Something						
A – A3 Northern Rd	5.8	14.66	0.85	2.8	9.29	0.72
B – Spur Road	4.9	22.73	0.82	1.6	6.80	0.61
C – A397 Northern Road	9.2	22.31	0.90	2.7	6.57	0.71
D – A3 Southampton Rd	1.3	3.05	0.53	2.0	4.53	0.65

6.4.13 The results show that all arms on the junction operate under capacity, with the improved pedestrian and cycling infrastructure in place. The highest RFC is observed on the A397 Northern Road during the AM peak, at 0.90. The queueing during this period is 9.2 PCU (52.9m) following the introduction of a signalised cycle crossing, which fits into the available

stacking space (126m). Additionally, the signalised cycle crossing will likely filter traffic flow on arrival to the A397 Northern Road/ Wayte Street/ Medina Road roundabout approximately 125m south of this junction, which has been classified as a Category 1 junction and therefore subject to a separate assessment.

6.4.14 It is highlighted that the benefits of active travel infrastructure improvements at this junction will improve the safety issues by providing pedestrian and cycling priority. Further safety benefits are gained by reducing the internal circulatory to two lanes which will limit lane weaving, whilst the junction still operates within capacity. Therefore, this mitigation has been taken forward to support the Local Plan growth and is expected to have a marked improvement on safety for those using active modes.

Other Options Considered

6.4.15 The other mitigation option considered for Spur Road Roundabout comprises simply reducing the circulatory to two lanes and Southampton Road having a stepped cycle track on Southampton Road westbound (drawing GB01T23C11-dwg-100-03.1 in Appendix H). Whilst the results of this also showed that the junction operates within capacity across all arms in the AM and PM peaks, it is noted that the active travel benefits are not as substantial as the preferred option with no full 'through' cycling infrastructure proposed due to a cycle lane located on Southampton Road only with no cycle crossing proposed.

6.4.16 Consequently, whilst both options improve infrastructure from a safety perspective, the preferred option has wider active travel benefits, and therefore this other option is not 'preferred' to be taken forward for mitigation.

6.5 Junction 5 - London Road / Angerstein Road / Gladys Avenue / Stubbington Avenue

6.5.1 This junction comprises a five arm unsignalised roundabout, located in the North End area of the city. Angerstein Road is one way eastbound only, allowing entry into the junction. Gladys Avenue is single lane which widens on approach to the junction to include a left turning flare lane. London Road north, Stubbington Avenue and London Road south all have one entry lane present.

6.5.2 A bus lane is present on London Road north for southbound traffic and London Road south for southbound traffic. Cyclists share traffic with vehicles. Unsignalised pedestrian crossings with dropped kerbs and tactile paving are available on all arms of the junction.

Model Validation

6.5.3 It is noted that 2021 survey data including queue lengths was available for this junction and has been used to validate the model. The survey data was collected in November 2021, and therefore outside of any national lockdown/restrictions due to the Covid-19 pandemic. **Table 19** details the amendments (final capacity adjustment) which have been made to the junction model arms to allow validation to meet the required criteria detailed in **Section 5.3.3**. A 100% value means that no capacity adjustment has been made as junction model data closely matched survey queue data.

Table 19. Junction 5 – Local Model Validation Amendments

ARM	% Capacity Adjustment
A – Gladys Avenue	100% (No adjustment required)
B – A2047 London Road	90% (-10%)
C – Stubbington Avenue	60% (-40%)
D – London Road	85% (-15%)
E – Angerstein Road	60% (-40%)

6.5.4 The table above shows a capacity adjustment was required to better align with the survey queue data four of the five arms at this junction to ensure the junction model queue lengths and survey queue lengths matched within a +/- 5 PCU value. No further validation was required, with all junction model queue lengths being within a +/-5 PCU value of queue lengths following the above capacity adjustments.

Model Results

6.5.5 The junction has been modelled using Junctions 10 software, with the results shown in **Table 20**.

Table 20. Junction 5 – Model Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2019 Base						
A – Gladys Avenue	1.4	10.76	0.58	1.2	9.67	0.53
B – A2047 London Road	15.9	84.65	0.98	8.1	46.34	0.89
C – Stubbington Avenue	0.1	16.95	0.09	0.1	12.79	0.07
D – London Road S	2.0	10.91	0.63	10.3	40.39	0.92
E – Angerstein Road	3.3	47.11	0.78	0.0	0.00	0.00
2041 Baseline						
A – Gladys Avenue	2.0	13.66	0.67	2.9	16.45	0.74
B – A2047 London Road	11.7	70.83	0.95	11.4	71.14	0.94
C – Stubbington Avenue	0.2	17.87	0.10	0.1	13.83	0.10
D – London Road S	2.2	11.37	0.67	12.7	48.37	0.94
E – Angerstein Road	8.9	106.76	0.95	0.0	0.00	0.00
2041 Do Minimum						
A – Gladys Avenue	2.0	13.57	0.66	3.3	19.21	0.77
B – A2047 London Road	8.3	54.73	0.91	15.2	87.94	0.98
C – Stubbington Avenue	0.2	17.70	0.11	0.1	13.80	0.10
D – London Road S	5.8	24.14	0.85	13.5	51.07	0.95
E – Angerstein Road	30.3	314.53	1.17	0.0	0.00	0.00

6.5.6 It is noted that there are no flows using the Angerstein Road arm in the PM peak. The SRTM observes that during the PM peak, vehicles are routing via Cardiff Road and Derby Road to the A2047 London Road.

6.5.7 The results show the following:

- 2019 Base Scenario:
  - The A2047 London Road North arm is operating at near full capacity with an RFC value of 0.98 and 0.89 in the AM and PM peak respectively, resulting in an AM peak queue of 15.9 PCUs and PM peak queue of 8.1 PCUs.
  - The London Road South arm is nearing capacity in the PM peak with an RFC value of 0.92 and a subsequent peak queue of 10.3 PCUs.

- 2041 Baseline:
  - The A2047 London Road North arm is operating at near full capacity with an AM RFC value of 0.95 (a 0.03 decrease from the 2019 Base scenario), resulting in a queue of over 11.7 PCUs.
  - The London Road South arm PM peak RFC increases to 0.94, resulting in a queue of 12.7 PCUs.
  - Angerstein Road arm AM peak RFC increases to 0.95, resulting in a queue of 8.9 PCUs.
- 2041 Do Minimum:
  - The A2047 London Road North arm is almost operating at full capacity with a peak AM RFC value of 0.91 and peak PM RFC value of 0.98.
  - The London Road South arm AM peak RFC increases to 0.85, resulting in a queue of 5.8 PCUs. The PM peaks RFC is 0.95, resulting in a queue of 15.2 PCUs.
  - The Angerstein Road arm is operating over capacity during the AM peak with an RFC value of 1.17, resulting in a queue of 30.3 PUCs (174m). There is 130m worth of stacking space available until the Angerstein Road/Cardiff Road junction, therefore the queuing does exceed the available stacking space present and could impact the adjacent junction performance.

6.5.8 This junction is operating at near capacity in the 2041 Baseline scenario, with arms having RFC values over 85%. Angerstein Road in particular increases to above capacity in the 2041 Do Minimum scenario, with an RFC increase of 0.22% between the 2041 Baseline and 2041 Do Minimum scenarios. London Road S has an increase in RFC of 0.18% in the AM peak between the 2041 Baseline and 2041 Do Minimum scenario, resulting in this arm operating at the threshold of 0.85 in the 2041 Do Minimum. It can therefore be seen that both committed developments and the Local Plan play a role in increased congestion at this junction.

Mitigation Options & Results

6.5.9 SYSTRA assessed a number of mitigation options for this roundabout, as noted in **Table 21** below.

Table 21. Junction 5 Options Considered

Description	Results
• **As per PCC proposals, full signalisation with pedestrian crossings in each arm and Angerstein Road changed to one way westbound**	• High levels of congestion on London Road (south) and Gladys Road arms in both 2041 DM AM & PM scenarios. • Max DoS of 122.7% on London Road (south) arm in 2041 DM PM, resulting in MMQ of 127 PCUs. • This option would increase congestion on the London Road corridor when compared to the existing layout with the Local Plan development.
• **Angerstein Road changed to one way westbound. No pedestrian crossings.**	• Max RFC for London Road (south) arm is 1.13 in PM peak, resulting in max queue of 72 PCUs which would impact the operation of adjacent junctions. Represents a significant detriment when compared to performance of existing layout model (due to flows re-routing from Angerstein Road to London Road S). • London Road (north) approaching capacity in PM peak. Max RFC is 0.97 in PM peak, resulting in queue of 15 PCUs.
• **Ban access to junction from Angerstein Road, therefore the junction becomes a 4-arm roundabout. No pedestrian crossings.**	• Max RFC on London Road (north) arm of 0.98, resulting in a max queue of 15 PCUs • No substantial change in congestion conditions on London Road corridor when compared to existing layout. • Closure of Angerstein Road arm presents issues re servicing vehicle access, could require a filter providing access to roundabout

6.5.10 Upon analysing the results of all the options above and any issues the options pose, its concluded that the introduction of traffic signals and pedestrian crossings significantly constrains junction capacity when compared to non-signalised options. Making Angerstein Road one-way westbound leads to greater congestion on London Road South. Non-signalised options do not allow for improved pedestrian infrastructure. If Angerstein Road were to be closed, there will be significant issues in relation to servicing vehicle access to the properties on the eastern end of the road.

6.5.11 It is noted that this junction has five arms in a constrained footprint, and therefore any mitigation proposed is challenging and leading to increased congestion. Based on the above, no mitigation is 'preferred' to be taken forward for this junction. The Do Minimum results show that only Angerstein Road is operating over capacity in the AM peak only, and the options tested above could significantly increase congestion on other arms. Therefore, no physical mitigation is proposed to be taken forward as part of the infrastructure package to support Local Plan growth. Wider measures to support mode shift across the city as set out in Local Transport Plan 4, LCWiP and as part of the Do Something Local Plan mitigation is a more suitable approach to try and drive down any journey time impacts particularly for buses in this location through reduced uptake of the private vehicle reducing the impact through this junction.

6.6 Junction 7 – Rudmore Roundabout

6.6.1 Rudmore roundabout is a five arm partially signalised roundabout comprising the M275, the A3 Twyford Avenue, the A2047 Kingston Crescent, A3 Mile End Road and Wharf Road. The

M275 contains a flyover through this junction, linking to Tipner Interchange to the north and Church Street roundabout to the south. It is noted that upgrade work has recently been completed at this roundabout, in relation to widening the northbound slip road, to allow two traffic lanes to exit the roundabout.

6.6.2 The roundabout includes a three-lane circulatory across the majority, albeit the stop line on the north-east side of the roundabout is two lanes. The M275 southbound off-slip comprises of three lanes on entry, the A3 Twyford Avenue comprising three lanes and Kingston Crescent comprises three lanes on entry. Mile End Road has four lanes on entry including a left only lane, whilst Wharf Road has two lanes entering the roundabout and one bypass left turning lane. There are sections of pedestrian and cyclist underpasses present throughout the junction.

Model Validation

6.6.3 The degree of saturation values were validated against available SRTM volume over capacity data. **Table 22** details the amendments which have been made to the saturation flows on the junction model arms to allow validation to meet the required criteria detailed in **Section 5.3.3.** An addition of saturation flow indicates that more vehicles can pass through a signal in any given hour, whilst a decrease in saturation flows indicates less vehicles can pass through a signal in any given hour when compared to a non-validated junction model. Where an arm/lane is not shown in the table, the flows have not been amended.

Table 22. Junction 7 – Local Model Validation Amendments

ARM	Lane	Previous Sat Flow	Amended Sat Flow
A – M275 SB Off-Slip	1- Nearside	1827	AM & PM Peak: 2200 (373)
	2- Middle	1915	AM & PM Peak: 2200 (285)
	3- Offside	1919	AM & PM Peak: 2200 (281)
B – Stamshaw Road	1- Nearside	1882	AM & PM Peak: 2200 (318)
	2- Middle	1921	AM & PM Peak: 2200 (279)
	3- Offside	1906	AM & PM Peak: 2200 (294)
D – A3 Mile End Road	1- Nearside	1877	AM & PM Peak: 2200 (323)
	2- Middle	1884	AM & PM Peak: 2200 (316)
	3- Middle	1976	AM & PM Peak: 2200 (224)
	4- Offside	1980	AM & PM Peak: 2200 (220)
	2- Middle	2082	AM & PM Peak: 2200 (118)
	3- Offside	2082	AM & PM Peak: 2200 (118)

The table above shows that capacity adjustments were required to better align with the SRTM volume over capacity data on a number of lanes for all signalised arms. The highest increase in saturation flow was required on the M275 southbound off-slip for the nearside lane.

6.6.4 Despite this validation exercise, all arms AM peak DoS did not reach the criteria of being 15 percentage points higher or lower than the SRTM data, with calibration adjustments undertaken based on a reasonable range (saturation upper limit 2,200). No further validation is required as this is noted as a robust adjustment as the V/C is higher in the junction model for four out of five arms, compared to the SRTM results, and any further adjustments risk not being representative and noted as excessive.

Model Results

6.6.5 The junction in its existing layout has been modelled using LinSig software, with the results shown in **Table 23**.

Table 23. Junction 7 – Model Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	Degree of Saturation (%)	Queue (PCU)	Delay (s)	Degree of Saturation (%)
2019 Base						
A – M275 SB Off-Slip	15.1	41.4	88.0%	7.3	11.0	47.8%
B – Stamshaw Road	9.9	44.9	87.4%	3.8	32.3	58.5%
C – Kingston Crescent	46.2	85.6	100.5%	1.7	6.2	56.2%
D – A3 Mile End Road	0.7	32.1	14.3%	3.6	34.2	50.9%
E – Wharf Road	3.8	35.7	53.6%	5.0	30.9	56.6%
2041 Baseline						
A – M275 SB Off-Slip	10.8	9.2	62.4%	13.2	17.0	70.7%
B – Stamshaw Road	13.1	30.6	84.7%	7.5	60.0	88.6%
C – Kingston Crescent	68.4	328.6	117.9%	8.0	21.9	85.2%
D – A3 Mile End Road	1.1	32.7	21.5%	6.8	33.5	68.3%
E – Wharf Road	5.3	40.0	67.3%	5.4	33.3	63.1%
2041 Do Minimum						
A – M275 SB Off-Slip	11.4	10.0	64.0%	18.8	34.9	89.2%
B – Stamshaw Road	11.0	19.2	68.7%	8.2	61.5	90.1%
C – Kingston Crescent	68.7	307.9	116.6%	48.5	107.9	102.3%
D – A3 Mile End Road	1.1	33.5	22.3%	7.3	33.1	69.0%
E – Wharf Road	4.7	32.1	56.6%	6.0	42.6	74.8%

6.6.6 The results show the following:

- 2019 Base Scenario:
  - The M275 southbound off-slip arm is nearing capacity in the AM peak with a DoS of 88.0%.
  - The Stamshaw Road arm is nearing capacity in the AM peak with a DoS of 87.4%.
  - The Kingston Crescent arm is operating over capacity in the AM peak with a DoS of 100.5% and a resulting queue of 46.2 PCU (266m). There is 267m worth of stacking space until the Kingston Crescent/Gamble Road/Heathfield

Road junction, therefore the queuing is accommodated in the available stacking space.

- 2041 Baseline:
  - Stamshaw Road operates near capacity at 84.7% in the AM peak and 88.6% in the PM peak respectively.
  - The Kingston Crescent is operating over capacity in the AM peak with a DoS of 117.9%, resulting in a queue of 68.4 PCUs (393m). This exceeds the 267m of stacking space available.
  - There is significant queueing within the circulatory on the north east circulatory (associated with the M275 SB Off-slip, 114.9 PCU).

- 2041 Do Minimum:
  - Stamshaw Road operates near capacity at 90.1% in the PM peak.
  - The M275 southbound off-slip has a capacity of 89.2% in the PM peak.
  - The Kingston Crescent is operating over capacity in the AM peak with a DoS of 116.6%, resulting in a queue of 68.7 PCUs (395m) and 102.3% in the PM resulting in a queue of 48.5 PCU (278m). This exceeds the 267m of stacking space available.
  - There is significant queueing within the circulatory on the north east circulatory (associated with the M275 SB Off-slip, 118.5 PCU).

6.6.7 The results indicate that Kingston Crescent is already operating above capacity in the 2019 Base for the AM peak and in the nearing capacity in the 2041 Baseline for the PM peak. This is due to the fact that all other arms are signalised, at the detriment of the Kingston Crescent. The DoS decreases in the AM peak and increases by 17.3% in the PM peak between 2041 Baseline and 2041 Do Minimum scenario- this is attributed to re-routing observed in the AM peak, due to the congestion already present vehicles are choosing alternative routes such as via Stamshaw Road, which is already operating at near capacity in the 2041 Baseline PM at 88.6%, with an increase of 1.5% in the 2041 Do Minimum scenario. The M275 SB off-slip increases by 18.5% in the 2041 Do Minimum scenario, compared to the 2041 Baseline scenario. Furthermore, there is significant queueing on the NE circulatory in between the M275 off-slip and Stamshaw Road in the 2041 Baseline and 2041 Do Minimum. There is 114.9 PCU (661m) and 118.5 PCU (681m) of queuing present at a maximum respectively in the AM peak, with only 20m worth of stacking space available; hence queuing exceeds stacking space. It is therefore concluded that congestion at this roundabout is a result of both background growth and Local Plan development impacts, however background growth contributes to congestion at a greater extent than Local Plan impacts.

Preferred Mitigation Option

6.6.8 The preferred option comprises the following:

- Signalisation of Kingston Crescent and East Circulatory; and
- Extension of cycle time from 70 seconds to 90 seconds.

6.6.9 The junction in its preferred layout has been modelled using LinSig, with the results shown in **Table 24.**

6.6.10 The 2041 Do Minimum flows have been used to assess the proposed mitigation.

Table 24. Rudmore Roundabout Preferred Mitigation Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	**Delay (s)**	**Degree of Saturation (%)**	**Queue (PCU)**	**Delay (s)**	**Degree of Saturation (%)**
2041 Do Something						
A – M275 SB Off-Slip	13.1	10.1	61.4%	19.7	28.3	80.0%
B – Stamshaw Road	23.5	42.4	90.2%	9.8	41.9	72.9%
C – Kingston Crescent	28.2	158.5	103.7%	16.5	41.6	84.5%
D – A3 Mile End Road	1.4	48.9	27.6%	9.7	45.3	76.4%
E – Wharf Road	7.7	56.9	77.6%	7.4	46.2	70.7%

6.6.11 The results show that the Kingston Crescent Arm is operating over capacity in the AM peak, but under capacity in the PM peak. The DoS represents an improvement to the Do Minimum scenario, with a decrease of 12.9% in the AM peak and a decrease of 17.8% in the PM peak. The maximum queue on Kingston Crescent is 28.2 PCU (162m), which fits into the 267m worth of stacking space available to the next major junction (Kingston Crescent/Heathfield Road/Gamble Road). There is internal queueing of maximum 43.4 PCU on the north-east circulatory and 48.8 PCU on the eastern circulatory.

6.6.12 The Do Something scenario represents a significant improvement to the Do Minimum scenario, where capacity is better balanced Stamshaw Road and Kingston Crescent. It is recognised that Stamshaw Road is a significant bus corridor and therefore any mitigation at this roundabout requires consideration of impact on bus journey times.

6.6.13 Therefore, this mitigation has been taken forward to support the Local Plan growth having a substantial improvement on internal circulatory queuing at the roundabout and better balancing queues between Stamshaw and Kingston Crescent.

Other Options Considered

6.6.14 The other option considered for Rudmore Roundabout was extending the cycle time from 70 seconds to 120 seconds. However, this causes further excessive queueing in the NE and East Circulatory with significant queues of maximum 218.8 PCU and 606.3 PCU in the AM peak respectively.

6.6.15 Therefore, this option should not be taken forward for mitigation, due to the high levels of queuing on the circulatory, which would lead to congestion on all arms.

6.7 Junction 8 – Lakeside Access

6.7.1 The Lakeside Access is a four arm unsignalised roundabout comprising the A27 (Western Road) / Northarbour Road / Lakeside Access. This junction provides access to the Portsbridge roundabout to the south via the A27 Western Road, and the M275 / A27 (Southampton Road) / A27 (Western Road) crossroads to the north. The Lakeside Industrial Park is located in close proximity to the junction, with access provided via the lakeside access roundabout arm.

6.7.2 Each arm of the roundabout has a two-lane entry, with a three-lane circulatory on the east and west side of the roundabout and a one lane circulatory to the north and south of the roundabout. The Lakeside Access arm central lane is utilised as both an inbound (during 4pm-7pm) and outbound lane (during 7am-10am). A grade separated pedestrian underpass is provided from east to west across the roundabout, as well as a shared pedestrian cycle route providing access to the Lakeside access from the south.

Model Validation

6.7.3 No validation was required at this junction as the SRTM queues and junction modelling queues were within 5 PCUs of each other on all arms. Therefore, the junction model is representative and has provided a robust set of results as junction model and SRTM results match as close as possible.

Model Results

6.7.4 The junction has been modelled using Junctions 10 software, with the results shown in **Table 25**.

Table 25. Junction 8 –Model Results

	AM (08:00-09:00)				PM (17:00-18:00)			
	Queue (PCU)	Delay (s)	RFC	LoS	Queue (PCU)	Delay (s)	RFC	LoS
2019 Base								
A – A27 Western Road N	2.7	5.93	0.71	A	3.0	6.70	0.73	A
B – Northarbour Road	0.0	0.00	0.00	A	0.0	0.00	0.00	A
C – A27 Western Road S	2.6	5.89	0.69	A	1.4	3.65	0.56	A
D – Lakeside Access	0.7	6.32	0.32	A	1.2	4.96	0.50	A
2041 Baseline								
A – A27 Western Road N	5.5	10.26	0.85	B	5.2	11.38	0.83	B
B – Northarbour Road	0.0	7.50	0.01	A	0.1	7.10	0.07	A
C – A27 Western Road S	4.0	8.96	0.80	A	1.7	4.13	0.60	A
D – Lakeside Access	0.7	4.81	0.38	A	5.6	14.80	0.84	B
2041 Do Minimum								
A – A27 Western Road N	8.4	16.10	0.88	C	3.7	9.68	0.77	A

B – Northarbour Road	0.8	12.11	0.46	B	0.2	7.93	0.17	A
C – A27 Western Road S	11.1	28.33	0.92	D	3.2	6.94	0.75	A
D – Lakeside Access	1.7	6.95	0.58	A	483.1	854.66	1.43	F

6.7.5 The results show the following:

- 2019 Base Scenario:
  - All arms are operating within capacity.
  - The A27 Western Road North arm has a maximum RFC value of 0.71 in the AM peak, leading to a maximum queue of 2.7 PCUs. In the PM peak, this arm has a maximum RFC value of 0.73, resulting in a maximum queue of 3 PCUs.
- 2041 Baseline:
  - The A27 Western Road North arm RFC value increases to 0.85 and 0.83 in the AM and PM peaks respectively, resulting in an AM queue of 5.5 PCUs and of 5.2 PCUs in the PM peak.
  - The Lakeside Access arm RFC value increases to 0.84, which results in a queue of 5.6 PCUs.
- 2041 Do Minimum:
  - The A27 Western Road North arm RFC value increases to 0.88 in the AM peak, resulting in a queue of 8.4 PCUs. The RFC value decreases to 0.77 in the PM peak, leading to a queue of 3.7 PCUs.
  - The Lakeside Access arm is operating significantly over capacity during the PM peak with an RFC value of 1.43 which results in a queue of 483.1 PCUs (2778m). There is approximately 250m metres of stacking space available till the Lakeside Access/Car Park junction. Therefore, the queueing exceeds the available stacking space.

6.7.6 In the 2041 Baseline scenario, the Lakeside Access arm is forecasted to operate with an RFC of 0.84 in the PM peak. When the Local Plan development is factored in, the RFC increases by 0.59 to 1.43 in the 2041 Do Minimum scenario. The Local Plan developments therefore do have an impact at this junction, with the Lakeside North Harbour strategic site accessed from this junction.

Mitigation Options & Results

6.7.7 Following the assessment of the performance at the existing Lakeside Access roundabout, two options were considered for mitigation. The results below show the preferred option in detail and provides a high level overview of the other options considered.

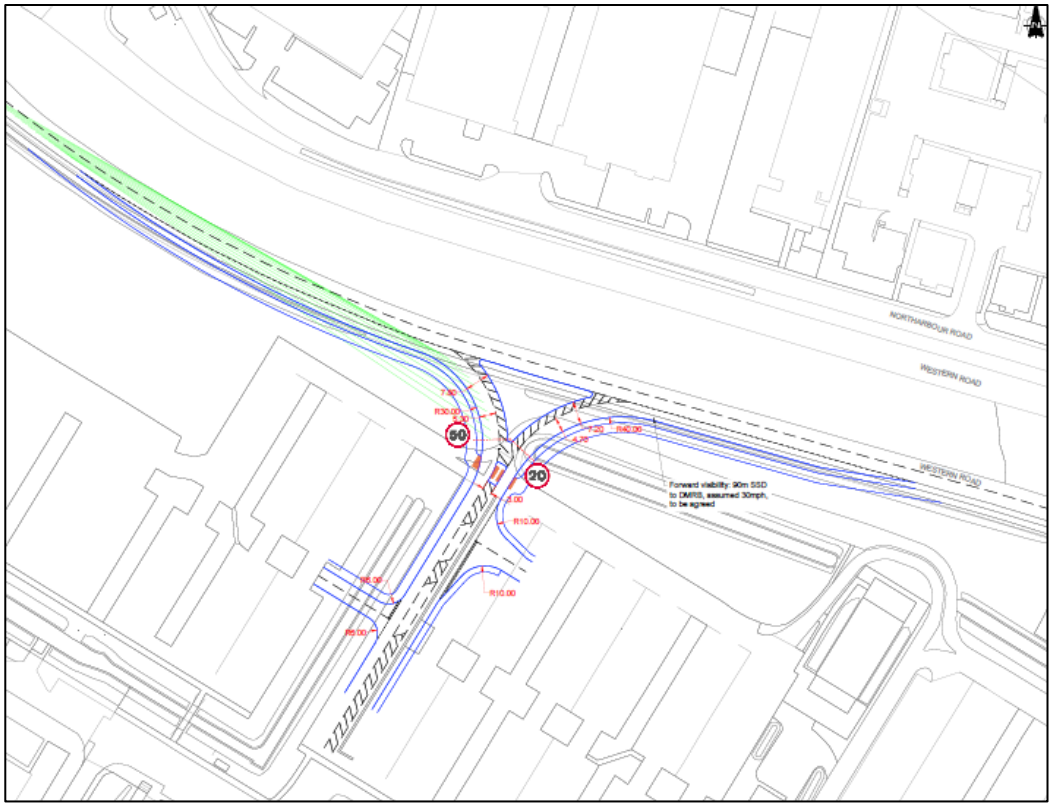
Preferred Options

6.7.8 The preferred option (**Figure 12**, GB01T23C11-dwg-100-08.1 in **Appendix H**) comprises the following:

6.7.9 Add a secondary access to the northwest of the Lakeside development site on Western Road, as per the principle set out in the outline planning application 16/00416/FUL. This will be left turn exit/ entry only; and

- It is noted that all traffic turning left out of the Lakeside development site (onto Western Road) has been re-assigned to use this access.

Figure 12. Lakeisde Access Preferred Mitigation



6.7.10 The junction in its preferred layout has been modelled using Junctions 10, with the results shown in **Table 26.**

6.7.11 The 2041 Do Minimum flows have been used to assess the proposed mitigation.

Table 26. Lakeside Access Preferred Mitigation Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2041 Do Something						
A – A27 Western Road N	8.4	16.07	0.88	9.3	25.12	0.90
B – Northarbour Road	0.8	12.10	0.46	0.4	16.02	0.29
C – A27 Western Road S	11.2	28.44	0.92	1.0	3.46	0.48
D – Lakeside Access	0.4	3.74	0.25	3.1	8.53	0.76

6.7.12 The results show that all arms of the junction operate under capacity with this mitigation in place. Whilst the RFC results of the A27 Western Road N increases in the PM peak compared to the Do Minimum scenario (increase by 0.13) it is still within capacity and on balance the junction mitigation shows a significant improvement as the Lakeside access arm experiences a significant decrease in RFC to allow the arm to operate within capacity (decrease by 0.67), due to the second access taking traffic pressure away from this arm. Queuing on all arms is minimal and fits within the available stacking space.

6.7.13 Therefore, this mitigation has been taken forward to support the Local Plan growth as it has been identified that a secondary access at Lakeside development is essential to support the targeted levels of growth in the Lakeside Strategic Site.

Other Options Considered

6.7.14 The other mitigation option considered for Lakeside Access comprises a secondary access from Lakeshore Drive, onto Western Road. Traffic flows travelling from Portsbridge Roundabout on the A27 Western Road, entering the Lakeside Access arm were re-assigned using Lakeshore Drive. The results showed that Lakeside Access arm is still operating over capacity in the PM peak, with an RFC of 1.43.

6.7.15 Consequently, this mitigation option was discarded, as no improvement to the RFC was made, with significant traffic pressure on the Lakeside Access arm.

6.8 Junction 9 – A2030 Eastern Road / A27 Havant Bypass

6.8.1 The A2030 Eastern Road/ A27 Havant Bypass is a signalised four arm roundabout providing access to the eastern side of the Portsmouth road network. The A27 passes over the junction on a flyover, with signalised pedestrian crossings provided across each entry arm as well as sections of the roundabout circulatory. The A2030 Eastern Road N and A27 WB off-slip both have three entry arms into the junction. The A2030 Eastern Road S and A27 EB off-slip both have two entry arms into the junction. The roundabout circulation varies from a two-lane circulatory on the southern roundabout section, a three-lane circulatory on the northern section and a four-lane circulatory on the eastern and western sections of the circulatory.

Model Validation

6.8.2 The junction model degree of saturation values were validated against available SRTM volume over capacity data. **Table 27** details the amendments which have been made to the saturation flows on the junction model arms to allow validation to meet the required criteria detailed in **Section 5.3.3.** An addition of saturation flow indicates that more vehicles can pass through a signal in any given hour, whilst a decrease in saturation flows indicates less vehicles can pass through a signal in any given hour when compared to a non-validated junction model. Where a lane is not shown in the table, the flows have not been amended.

Table 27. Junction 9 – Local Model Validation Amendments

ARM	Lane	Previous Sat Flow	Amended Sat Flow
A – A2030 Eastern Road N	1- Nearside	1847	AM & PM Peak: 2200 (353)
	2- Middle	2021	AM & PM Peak: 2200 (179)
	3- Offside	2041	AM & PM Peak: 2200 (159)
C – A2030 Eastern Road S	1- Nearside	1856	AM & PM Peak: 2200 (344)

	2- Offside	1987	AM & PM Peak: 2200 (213)

6.8.3 The table above shows a capacity adjustment was required to better align with the SRTM volume over capacity data on all lanes associated with the A2030 Eastern Road North and South arms. These changes in saturation flows allows the junction model to have a degree of saturation as close as possible for each arm to the SRTM, with any difference being 15 percentage points higher or lower for the majority of arms.

6.8.4 Despite this the DoS values on A2030 Eastern Road North in the PM peak has not reached the criteria of being 15 percentage points higher or lower than the SRTM data, with calibration adjustments undertaken based on a reasonable range (saturation flows upper limit 2,200). No further validation is required as this is noted as a robust adjustment as the V/C is higher on the A2030 Eastern Road North arm in the junction model compared to the SRTM results, and any further adjustments not being representative and noted as excessive.

Model Results

6.8.5 The junction has been modelled using LinSig software, with the results shown in **Table 28.**

Table 28. Junction 9 –Model Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	Degree of Saturation (%)	Queue (PCU)	Delay (s)	Degree of Saturation (%)
2019 Base						
A – A2030 Eastern Road N	10.2	23.9	73.8%	13.1	21.7	79.0%
B – A27 WB Off Slip	16.4	21.8	88.8%	6.0	14.4	61.7%
C – A2030 Eastern Road S	125.7	292.2	116.4%	39.7	58.0	99.7%
D – A27 EB Off Slip	24.0	48.2	96.4%	11.1	20.1	75.2%
2041 Baseline						
A – A2030 Eastern Road N	13.0	29.2%	83.4%	16.9	32.1	89.3%
B – A27 WB Off Slip	14.6	19.5	86.8%	7.3	15.9	70.4%
C – A2030 Eastern Road S	276.0	568.5	140.7%	133.0	279.9	115.8%
D – A27 EB Off Slip	37.2	89.4	101.6%	12.8	25.6	82.4%
2041 Do Minimum						
A – A2030 Eastern Road N	15.8	36.7	89.9%	15.5	28.9	86.6%
B – A27 WB Off Slip	14.4	19.3	86.6%	7.1	15.7	69.2%
C – A2030 Eastern Road S	355.7	710.7	157.3%	177.9	387.2	124.0%

D – A27 EB Off Slip	43.2	109.7	103.2%	12.0	24.0	79.8%

6.8.6 The results show the following:

- 2019 Base Scenario:
  - The A27 westbound off-slip arm and the A27 eastbound off-slip arm are both nearing capacity in the AM peak with a DoS of 88.8% and 96.4% respectively.
  - The A2030 Eastern Road South arm is operating over capacity in the AM peak with a DoS of 116.4%, resulting in a queue of 125.7 PCUs (723m). There is 950m of stacking space available, therefore this level of queueing can be accommodated.

- 2041 Baseline:
  - In the PM peak, the A2030 Eastern Road North arm is nearing capacity in the PM peak with a DoS of 89.3%.
  - In the AM peak, the A27 westbound off-slip is nearing capacity with a DoS of 86.8%.
  - The A2030 Eastern Road South arm is operating over capacity with an AM DoS of 140.7% resulting in a queue of 276 PCUs (1587m). These exceeds the 950m worth of stacking space available. In the PM peak, it is operating over capacity with a DoS of 115.8% resulting in a queue of 113 PCUs (650m).
  - The A27 eastbound off-slip arm is operating over capacity in the AM peak with a DoS of 101.6%, resulting in a queue of 37.2 PCUs (214m). There is 379m worth of stacking space therefore the queue can be accommodated.

- 2041 Do Minimum:
  - The A2030 Eastern Road North arm is nearing capacity with a DoS of 89.9% and 86.6% in the AM and PM peaks respectively.
  - The A27 westbound off-slip is nearing capacity with a DoS of 86.6% in the AM peak.
  - The A2030 Eastern Road South arm is operating over capacity with an AM DoS of 157.3% and a PM peak of 124.0%, which result in a queue of 355.7 PCUs (2045m) and 177.9 PCUs respectively (1023m). This exceeds the 950m worth of stacking space present to the next major junction.
  - A A27 eastbound off-slip is operating over capacity in the AM peak with a DoS of 103.2% and 43.2 PCUs (248m) worth of queueing. This can be accommodated within the 500m of stacking space available.

6.8.7 The results identify that three arms are either reaching near capacity or operating over capacity in both the AM and PM peaks in the 2041 Baseline scenario. For the A2030 Eastern Road South arm, the DoS increases by 16.6% in the AM peak and 8.2% in the PM peak between the 2041 Baseline and 2041 Do Minimum scenario. It is of note that this arm however already operates over capacity in the 2019 Base scenario.

6.8.8 Furthermore, the queueing on the SRN can be accommodated in the stacking space available for both the eastbound and westbound off-slips in all scenarios. Therefore, it is not considered that the level of targeted growth would impact the safe and efficient operation

of the off-slips from the A27. The highest levels of congestion are noted on the local road network on the A2030 Eastern Road south arm which experiences significant congestion in the 2041 Baseline alongside the 2041 Do Minimum scenario.

6.8.9 SYSTRA note congestion increases on the Eastern Road arm between the Baseline and Do Minimum scenarios; any mitigation on this arm is particularly challenging due to the bridge width and associated land constraints.

6.8.10 There are no clear mitigation options to be considered at this junction, due to the junction already operating above capacity in the 2019 Base and 2041 Baseline, therefore congestion is more significantly associated with background growth rather than Local Plan growth (it is still acknowledged that the Local Plan increases the DoS on a number of arms, however the rate of increase is less than background traffic growth).

6.8.11 No further mitigation options are being considered for this junction, specifically for mitigation associated with Local Plan growth.

6.9 Junction 10 - Stanhope Road / Station Street / Commercial Road S/ Commercial Road N

6.9.1 This junction is a four arm unsignalised roundabout comprising Stanhope Road, Commercial Road North, Station Street and Commercial Road South. Each arm has one lane on entry. Commercial Road North is a bus only arm. There are pedestrian crossings on all arms except Commercial Road North with a zebra crossing being located on the Station Street arm.

Model Validation

6.9.2 No validation was required at this junction as the SRTM queues and junction modelling queues were within 5 PCUs of each other on all arms. Therefore, the junction model is representative and has provided a robust set of results as junction model and SRTM results match as close as possible.

Existing Layout Results

6.9.3 The junction in its existing layout has been modelled using Junctions 10 software, with the results shown in **Table 29**.

Table 29. Junction 10 – Model Results

	AM (08:00-09:00)				PM (17:00-18:00)			
	Queue (PCU)	Delay (s)	RFC	LoS	Queue (PCU)	Delay (s)	RFC	LoS
2019 Base								
A – Commercial Road N	0.3	8.32	0.13	A	0.3	9.72	0.14	A
B - Station Street	1.0	8.82	0.45	A	1.5	10.57	0.59	B
C - Isambard Brunel Road	0.2	7.91	0.08	A	0.7	6.70	0.36	A
D - Stanhope Street	0.3	6.14	0.17	A	0.4	6.67	0.28	A
2041 Baseline								
A – Commercial Road N	0.4	7.98	0.15	A	0.4	8.78	0.17	A
B - Station Street	0.3	5.55	0.21	A	1.2	8.33	0.53	A
C - Isambard Brunel Road	0.3	5.98	0.18	A	1.1	7.92	0.49	A
D - Stanhope Street	0.1	8.04	0.05	A	0.1	8.78	0.05	A
2041 Do Minimum								
A – Commercial Road N	0.4	8.00	0.16	A	0.4	8.58	0.16	A
B - Station Street	0.5	5.93	0.28	A	2.6	13.59	0.72	B
C - Isambard Brunel Road	0.4	6.77	0.23	A	1.2	9.83	0.52	A
D - Stanhope Street	0.1	8.06	0.05	A	0.1	8.60	0.05	A

6.9.4 The results show the following:

- 2019 Base Scenario:
  - All arms are operating within capacity.
- 2041 Baseline:
  - All arms are operating within capacity.
- 2041 Do Minimum:
  - All arms are operating within capacity.
  - The highest RFC is observed on the Station Street arm during the PM peak (0.72). The queue is minimal at 2.6 PCU.

6.9.5 This junction operates within capacity within all scenarios. No further analysis is necessary and no mitigations are required to be proposed.

Committed Do Minimum Scenario

6.9.6 PCC has committed to convert this junction into a four-arm signalised junction, with the northern Commercial Road North arm being bus only. This scheme is being delivered as part

of the Transforming Cities Fund, and is proposed to better balance active travel and bus priority.

6.9.7 SYSTRA have undertaken a junction modelling assessment for the 2041 Do Minimum Scenario, with the signalised crossing in place. This represents how the junction will operate with Local Plan growth. This has been modelled in LinSig and has assumed a stage for each arm, and then one full pedestrian stage. A 120 second cycle time is required to allow the junction to operate within capacity based on the traffic growth forecast from the level of growth identified in the Local Plan. The results of the signalised junction, with a 120 second cycle time is shown in **Table 30** below.

Table 30. Junction 10 120 Cycle Time

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	DoS	Queue (PCU)	Delay (s)	DoS
2041 Do Minimum						
A - Commercial Road	4.8	53.4	43.5%	7.0	104.9	83.0%
B - Station Street	6.9	36.4	38.8%	23.9	55.9	88.8%
C – Isambard Brunel Road	5.5	49.2	43.7%	15.4	67.4	85.2%
D – Stanhope Road	1.6	75.7	34.2%	1.5	74.9	31.8%

The results show that with a 120 second cycle time the junction operates within capacity. The highest DoS is observed on Station Street during the PM scenario at 88%. There are 23.9 PCU worth of queueing on this arm (137m), with is able to fit in the 237m worth of stacking space available to the next major junction (East Surrey Street/Station Street).

6.9.8 SYSTRA also tested 60 second and 90 second cycle times, in relation to the 2041 Do Minimum scenario. The results showed:

- 60 seconds = Station Street operating with a DoS of 244.2% in the PM peak, with a queue length of 212.3 PCU. Isambard Brunel Street operating with a DoS of 154.5% in the PM peak, with a queue length of 81.3PCU.
- 90 seconds = Station Street operating with a DoS of 104.7% in the PM peak, with a queue length of 39 PCU. Isambard Brunel Street operating with a DoS of 103% in the PM peak, with a queue length of 23.7 PCU.

6.9.9 Consequently, to enable Local Plan associated development growth to come forward, a 120 second cycle time is recommended, allowing all arms to operate efficiently, whilst still representing a marked improvement for pedestrians compared to the existing layout.

6.10 Junction 11 - A288 Pier Road / Duisburg Way / Pembroke Road

6.10.1 This junction is a four arm unsignalised roundabout comprising Pier Road North, Duisburg Way, Pier Road South and Gordon Road. Each arm has one entry lane and one exit lane. There is a unsignalised pedestrian island on each arm of the roundabout, with tactile paving and dropped kerbs present. The junction is located to the north of Clarence Pier.

Model Validation

6.10.2 No validation was required at this junction as the SRTM queues and junction modelling queues were within 5 PCUs of each other on all arms. Therefore, the junction model is representative and has provided a robust set of results as junction model and SRTM results match as close as possible.

Existing Layout Results

6.10.3 The junction in its existing layout has been modelled using Junctions 10 software, with the results shown in **Table 31**.

6.10.4 It is of note that due to its strategic nature the SRTM does not model Pier Road South and all vehicles using Pier Road South are routed via Duisburg Way in the strategic model. The following flow assumptions have been made to allow local junction modelling of this four-arm roundabout:

- Saturn traffic flows going from Duisburg Way to Gordon Road, 30% are assumed to come from Pier Road South, 50% from Duisburg Way and 20% going from Duisburg Way to Pier Road South.
- Saturn traffic flows going from Duisburg Way to Pier Road North, 30% are assumed to come from Pier Road South, 50% from Duisburg Way and 20% going from Pier Road South to Duisburg Way.
- Saturn flows going to Duisburg Way from Pier Road North and Gordan Way, 30% are assumed to go to Pier Road South and 70% to Duisburg Way.
- Less flows are assigned to Pier Road South compared to Duisburg Way in all assumptions, due to less key destinations/ local roads to the south of this junction.

Table 31. Junction 11 – Local Model Validation Amendments

	AM (08:00-09:00)				PM (17:00-18:00)			
	Queue (PCU)	**Delay (s)**	**RFC**	**LoS**	**Queue (PCU)**	**Delay (s)**	**RFC**	**LoS**
2019 Base								
A – A288 Pier Road N	0.2	5.55	0.15	A	2.4	14.52	0.70	B
B – Duisburg Way	1.0	7.03	0.48	A	0.7	6.52	0.38	A
C – Pier Road S	0.5	6.28	0.34	A	0.5	5.73	0.30	A
D – Gordon Road / Pembroke Road	0.4	5.68	0.25	A	0.4	6.05	0.26	A
2041 Baseline								
A – A288 Pier Road N	0.7	7.54	0.42	A	3.0	18.00	0.75	C
B – Duisburg Way	1.0	7.40	0.48	A	1.4	9.46	0.58	A
C – Pier Road S	0.6	6.67	0.37	A	0.7	7.27	0.41	A

D – Gordon Road / Pembroke Road	0.4	6.11	0.26	A	0.6	6.97	0.38	A
2041 Do Minimum								
A – A288 Pier Road N	0.8	7.95	0.45	A	2.3	15.08	0.70	C
B – Duisburg Way	1.3	8.50	0.55	A	1.5	9.82	0.60	A
C – Pier Road S	0.8	7.76	0.45	A	0.7	7.44	0.42	A
D – Gordon Road / Pembroke Road	0.4	6.48	0.27	A	0.6	6.82	0.37	A

6.10.5 The results show the following:

- 2019 Base Scenario:
  - All arms are operating within capacity.
  - The A277 Pier Road North arm has an AM peak RFC value of 0.15 and a PM peak RFC value of 0.70, leading to a queue of 0.2 and 2.4 PCUs respectively.
- 2041 Baseline:
  - All arms are operating within capacity.
  - All arms display minor increases in their RFC values in comparison with the 2019 Base scenario.
  - The A288 Pier Road North arm AM peak RFC value increases to 0.42, leading to a queue of 0.7 PCUs. The A288 Pier Road North arm PM peak RFC value increases to 0.75, leading to a queue of 3 PCUs.
- 2041 Do Minimum:
  - All arms are operating within capacity.
  - The RFC value of all arms are comparable to the 2041 Baseline scenario. Whilst all arms display minor RFC value increases in the AM, in the PM a few small increases and decreases are observed.

This junction operates within capacity within all scenarios. No further analysis is necessary and no mitigations are required to be proposed.

6.11 Junction 12 - A397 Northern Road / Wayte Street / Medina Road

6.11.1 This junction is a four arm unsignalised roundabout comprising A397 Northern Road North/ Wayte Street/A397 Northern Road South/Medina Road. Spur Road roundabout (Junction 3) is located approximately 125m to the north of this junction.

Both Northern Road arms have two entry lanes. Wayte Street and Medina Road have one entry lane. There is a two-lane circulatory along the roundabout. There is a pedestrian bridge located on the A397 Northern Road south to allow safe crossing. Wayte Street and Medina Road have unsignalised island crossings with dropped kerbs and tactile paving present.

Model Validation

6.11.2 The junction model was validated against available SRTM queue data. **Table 32** details the amendments (final capacity adjustment) which have been made to the junction model arms to allow validation to meet the required criteria detailed in **Section 5.3.3.** A 100% value means that no capacity adjustment has been made as junction model data closely matched SRTM data.

Table 32. Junction 12 – Local Model Validation Amendments

ARM	% Capacity Adjustment (AM &PM)
A – A397 Northern Road N	100% (No capacity adjustment made)
B – Wayte Street	65% (-35%)
C – A397 Northern Road S	80% (-20%)
D – Medina Road	100% (No capacity adjustment made)

6.11.3 The table above shows a capacity adjustment was required to better align with the SRTM queue data on two of the four arms at this junction. Based on providing 35% of less capacity on Arm B and 20% less capacity on Arm C , the junction model queue lengths and SRTM queue lengths matched within a +/- 5 PCU value. No further validation was required, with all junction model queue lengths being within a +/-5 PCU value of SRTM queue lengths following the above capacity adjustments.

Model Results

6.11.4 The junction has been modelled using Junctions 10 software, with the results shown in **Table 33**.

Table 33. Junction 12 – Model Results

	AM (08:00-09:00)				PM (17:00-18:00)			
	Queue (PCU)	Delay (s)	RFC	LoS	Queue (PCU)	Delay (s)	RFC	LoS
2019 Base								
A – A397 Northern Road N	4.2	11.08	0.78	B	4.2	11.43	0.79	B
B – Wayte Street	3.7	25.24	0.76	D	5.5	35.85	0.85	E
C – A397 Northern Road S	2.8	7.95	0.72	A	3.8	10.16	0.78	B
D – Medina Road	0.5	7.18	0.30	A	0.8	9.60	0.44	A
2041 Baseline								
A – A397 Northern Road N	6.2	15.34	0.85	C	4.7	12.90	0.81	B
B – Wayte Street	5.6	35.89	0.84	E	6.4	39.69	0.87	E
C – A397 Northern Road S	5.3	13.43	0.83	B	5.0	13.25	0.82	B
D – Medina Road	0.7	9.99	0.40	A	1.0	11.64	0.50	B
2041 Do Minimum								
A – A397 Northern Road N	24.0	49.36	0.98	E	9.5	23.48	0.90	C
B – Wayte Street	5.3	39.84	0.84	E	6.0	40.14	0.87	E
C – A397 Northern Road S	6.8	19.03	0.87	C	5.4	14.44	0.84	B
D – Medina Road	0.7	9.75	0.39	A	1.1	12.52	0.51	B

6.11.5 The results show the following:

- 2019 Base Scenario:
  - All arms operate within capacity.
  - The Wayte Street arm is operating at near full capacity with an RFC value of 0.85 in the PM peak and a resulting peak queue of 5.5 PCUs.
- 2041 Baseline:
  - All arms operate within capacity.
  - The A397 Northern Road arm RFC increases in the AM peak to 0.85, and to 0.81 in the PM peak, thus resulting in 6.2 PCUs in the AM peak and 12.90 PCUs in the PM peak.
  - The Wayte Street arms PM peak RFC increases to 0.87, resulting in a queue of 6.4 PCUs.
- 2041 Do Minimum:
  - All arms operate within capacity.
  - The A397 Northern Road North arm is operating a near capacity, displaying an RFC value of 0.98 in the AM peak and of 0.90 in the PM peak, which equates to 24 PCUs (138m) and 9.5 PCU worth of queueing respectively. There is 130m worth of stacking space available to Spur Road Roundabout, therefore the queuing exceeds stacking space by approximately two vehicles. This is noted as minor and mitigations on Spur Road roundabout, specifically the signalised cycle crossing which is proposed to be implemented along A397 Northern Road, will help to filter traffic flow arriving at this junction in the southbound direction. Additionally, the crossing will help with providing gaps for vehicles entering/exiting driveways accessed off Northern Road.
  - The A397 Northern Road South arm operating a near capacity, with an AM peak RFC value of 0.87 resulting in a queue of 6.8 PCUs.
  - The Wayte Street arm is forecast to operate at near capacity with a PM peak value of 0.87, resulting in a queue of 6.0 PCUs.

6.11.6 This junction operates within capacity within all scenarios. Whilst some arms are operating near capacity in the 2041 Do Minimum scenario due to Local Plan growth, this does not exceed capacity. Further to this, mitigation on Spur Road roundabout is expected to improve the operation of this junction and therefore no further analysis is necessary and no mitigations are required to be proposed.

6.12 Junction 14 – Marketway / Landport View

6.12.1 This junction is formed of three arms comprising the A3 Marketway East, Landport View and the A3 Marketway West, with an isolated pedestrian signalised crossing on Marketway East. The junction lies in between Marketway roundabout (Junction 6) and Hope Street roundabout (Junction 13).

6.12.2 Marketway is a dual carriageway with two lanes plus a flare on the westbound approach and one lane on the eastbound approach to the crossing. Landport View has one entry lane and

one exit lane. No right turn access is provided from Marketway West to Landport View arm to guard rails separating Marketway.

6.12.3 A bus lane is present for traffic traveling westbound on Marketway, however it merges into a traffic lane on approach to the pedestrian crossing, and restarts to the west of Landport View.

Model Validation

6.12.4 The junction model degree of saturation values was validated against available SRTM volume over capacity data. **Table 34** details the amendments which have been made to the saturation flows on the junction model arms to allow validation to meet the required criteria detailed in Section 5.3.3. An addition of saturation flow indicates that more vehicles can pass through a signal in any given hour, whilst a decrease in saturation flows indicates less vehicles can pass through a signal in any given hour when compared to a non-validated junction model. Where an arm/lane is not shown in the table, the flows have not been amended.

Table 34. Junction 14 – Local Model Validation Amendments

ARM	Lane	Previous Sat Flow	Amended Sat Flow
A – Marketway East	1 - Nearside	1990	AM & PM Peak: 2200 (+210)
	2- Middle	2085	AM & PM Peak: 2200 (+115)
	3- Offside	1956	AM & PM Peak: 2200 (+244)
C- Marketway West	Only one Lane	1997	AM & PM Peak: 2200 (+203)

6.12.5 The table above shows a capacity adjustment was required to better align with the SRTM volume over capacity data on a number of lanes. The highest increase in saturation flow was required on the Marketway East for the offside lane. This change in saturation flows allows the junction model to have a degree of saturation as close as possible for each arm to the SRTM.

6.12.6 Despite this both arms noted above have not reached the criteria of being 15 percentage points higher or lower than the SRTM data, with calibration adjustments undertaken based on a reasonable range (saturation flow upper limit 2,200). No further validation is required as this is noted as a robust adjustment as the V/C is higher on both the above arms in the junction model compared to the SRTM results, and any further adjustments not being representative and noted as excessive.

Model Results

6.12.7 The junction has been modelled using LinSig software, with the results shown in **Table 35.**

Table 35. Junction 14- Model Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	Degree of Saturation (%)	Queue (PCU)	Delay (s)	Degree of Saturation (%)
2019 Base						
A – Marketway East	11.3	12.7	73.7%	11.3	12.8	73.8%

B– Landport View South	0.0	0.0	0.0%	0.1	11.9	1.1%
C – Marketway West	4.2	7.8	39.8%	5.1	8.4	45.7%
2041 Baseline						
A – Marketway East	14.7	16.0	82.6%	15.9	17.6	85.2%
B– Landport View South	0.3	11.9	4.6%	3.0	14.2	34.7%
C – Marketway West	3.4	7.3	33.2%	5.1	8.4	46.1%
2041 Do Minimum						
A – Marketway East	24.9	32.5	95.4%	29.7	42.4	97.7%
B– Landport View South	3.4	14.8	39.6%	3.3	14.6	38.1%
C – Marketway West	8.5	10.5	63.4%	12.2	13.5	76.4%

6.12.8 The results show the following:

- 2041 Base Scenario:
  - All arms are operating within capacity.
  - The Marketway East arm has an AM DoS of 73.7% and a PM DoS of 73.8%.
  - The Marketway West arm has an AM DoS of 39.8% and a PM DoS of 45.7%.
- 2041 Baseline
  - All arms are operating within capacity.
  - The Marketway East arm has increased to an AM DoS of 83.6% and a PM DoS of 85.2%. The highest queue observed is 15.9 PCU (92m). There is only 65m to the Marketway roundabout junction, therefore queueing does exceed available stacking space.
  - The Landport View South arm had increased to an AM DoS of 4.6% and a PM DoS of 34.7%.
  - The Marketway West arm has decreased in the AM peak to a DoS of 33.2%, and increased in the PM peak to 46.1%.
- 2041 Do Minimum:
  - All arms are operating within capacity.
  - The Marketway East arm is nearing capacity with an AM DoS of 95.4% and a PM DoS of 97.7%. The highest queue observed is 29.7 PCU (171m). There is only 65m to the Marketway roundabout junction, therefore queueing does exceed available stacking space.
  - The Landport View South arm DoS has increased in the AM peak to 39.6% and in the PM peak to 38.1%.
  - The Marketway West arm has increased to an AM DoS of 63.4% and a PM DoS of 76.4%.

6.12.9 This junction operates within capacity across all scenarios. Whilst the reported queues exceed the stacking space in the 2041 Do Minimum scenario, it is noted that this is also the case for the 2041 Baseline scenario. Access to Landport View is being removed as part of the City Centre Road Scheme (see Junction 4, 6 and 13) and this will have a significant change on vehicle movements and routing patterns within this section of the network. Therefore, no mitigation is required and no further analysis is necessary.

6.13 Junction 15 – London Road / Southwick Hill Road

6.13.1 The London Road (A3) / Southwick Hill Road (B1277) junction is a signalised T-junction. The junction is located on the principal radial corridor north of Portsmouth and is adjacent to the Queen Alexandra Hospital with access from Southwick Hill Road.

6.13.2 A signalised pedestrian crossing is provided across the Southwick Hill Road arm. An additional signalised staggered pedestrian crossing is located on the London Road South arm approximately 30m south of the stopline. Due to the location of multiple driveways serving the adjacent residential properties, the London Road North stopline is located approximately 25m north of the minor arm bell mouth, due to driveway access for adjacent residential properties.

Model Validation

6.13.3 The junction model degree of saturation values was validated against available SRTM volume over capacity data. **Table 36** details the amendments which have been made to the saturation flows on the junction model arms to allow validation to meet the required criteria detailed in **Section 5.3.3.** An addition of saturation flow indicates that more vehicles can pass through a signal in any given hour, whilst a decrease in saturation flows indicates less vehicles can pass through a signal in any given hour when compared to a non-validated junction model. Where a lane is not shown in the table, the flows have not been amended.

Table 36. Junction 15 – Local Model Validation Amendments

ARM	Lane	Previous Sat Flow	Amended Sat Flow
A – London Road North	1- Nearside	1887	AM Peak: 2000 (+113) PM Peak: 2200 (+313)
	2- Offside	1737	AM Peak: 2000 (+263) PM Peak: 1800 (+63)
B – Southwick Hill Road	Only one lane	1784	AM Peak: 2200 (+416 PM Peak: 1800 (+400)

6.13.4 The table above shows a capacity adjustment was required to better align with the SRTM volume over capacity data on all lanes associated with the London Road North and Southwick Hill Road arms. These changes in saturation flows allows the junction model to have a degree of saturation as close as possible for each arm to the SRTM, with any difference being within 15 percentage points higher or lower for the majority of arms. No further changes are required.

Model Results

6.13.5 The junction in its existing layout has been modelled using LinSig software, with the results shown in **Table 37**.

Table 37. Junction 15 –Model Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	Degree of Saturation (%)	Queue (PCU)	Delay (s)	Degree of Saturation (%)
2019 Base						
A – London Road South	3.7	6.2	53.8%	17.6	33.9	90.3%
B – Southwick Hill Road	9.3	50.3	75.7%	8.3	56.0	78.1%
C – London Road North	24.1	37.8	89.9%	19.3	121.6	99.4%
2041 Baseline						
A – London Road South	11.3	26.7	88.5%	16.7	32.6	89.3%
B – Southwick Hill Road	11.1	57.7	83.4%	15.2	104.3	96.4%
C – London Road North	62.5	33.7	97.6%	36.4	234.0	108.8%
2041 Do Minimum						
A – London Road South	11.3	26.7	88.5%	15.9	32.3	88.6%
B – Southwick Hill Road	13.6	65.7	89.1%	19.8	141.9	101.1%
C – London Road North	46.8	107.4	102.2%	40.4	243.8	109.9%

6.13.6 The results show the following:

- 2019 Base Scenario:
  - All arms are operating within capacity.
  - The London Road South arm is nearing capacity in the PM peak with a DoS of 90.3%.
  - The London Road North arm is nearing capacity with an AM DoS of 89.9% and a PM DoS of 99.4%.
- 2041 Baseline
  - The London Road South arm AM is nearing capacity with an AM DoS of 88.5% and a PM DoS of 89.3%.
  - The Southwick Hill Road arm is nearing capacity in the PM peak with a DoS of 96.4%.
  - The London Road North arm DoS increases to 97.6% in the AM peak and is operating over capacity in the PM peak with a DoS of 108.8%, resulting in a queue of 36.4 PCUs (209m). There is 420m worth of stacking space available to the next major junction. therefore the queue does not exceed the available stacking space.
- 2041 Do Minimum:

- All three arms are nearing capacity or are operating over capacity.
- The London Road South arm AM is nearing capacity with an AM DoS of 88.5% and a PM DoS of 88.6.3%.
- The Southwick Hill Road arm is nearing capacity in the AM peak with a DoS of 89.1% and is operating over capacity in the PM peak with a DoS of 101.1%, resulting in a queue of 19.8 PCUs (114m). There is 160m worth of stacking space therefore the queue remains within the available stacking space
- The London Road North arm DoS is operating over capacity with an AM DoS of 102.2%, resulting in a queue of 46.8 PCUs (270m). It is operating over capacity in the PM peak with a DoS of 109.9% resulting in a queue of 40.4 PCUs (232m). There is 420m worth of stacking space therefore the queue is can be accommodated in the available stacking space in the AM and PM peak.

6.13.7 It can be seen that the DoS increases for all arms between the 2019 Base and 2041 Baseline. Between the 2041 Baseline and 2041 Do Minimum scenario, there are minor increases in DoS with the highest increase being 5.7% on Southwick Hill Road in the AM Peak. Therefore, congestion is a result of committed developments and background growth to a greater extent that the Local Plan growth.

Mitigation Options & Results

6.13.8 A mitigation option was considered at this junction. This comprises the following:

- PCC asked SYSTRA to consider the London Road North offside lane to be allocated as right turn only, to Southwick Hill Road; and
- Signal staging has been rationalised using two stage streams to provide better coordination of signal timings.

6.13.9 The junction in its preferred layout has been modelled using Junctions 10, with the results shown in **Table 38.**

6.13.10 The 2041 Do Minimum flows have been used to assess the proposed mitigation.

Table 38. Junction 15 Mitigation Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	Degree of Saturation (%)	Queue (PCU)	Delay (s)	Degree of Saturation (%)
2041 Do Something						
A – London Road South	19.0	53.9	86.1%	30.0	96.7	98.4%
B – Southwick Hill Road	15.5	65.4	83.6%	19.2	11.9	97.1%
C – London Road North	14.7	72.1	85.8%	23.7	99.7	96.4%

6.13.11 The results show that all arms operate within capacity with the mitigation in place and offer a marked improvement on junction performance. The DoS on London Road North in

particular has reduced from over capacity to within capacity, reduced by 16.4% in the AM peak and 13.5% in the PM peak.

6.13.12 The highest queue is observed on London Road South during the PM peak at 30 PCU (172m). There is c.260m worth of stacking space available to the next major junction (Spur Road Roundabout) and therefore this level of queueing can be accommodated.

6.13.13 Therefore, with this mitigation brining the junction into operating within capacity, it is recommended that this mitigation is taken forward.

6.13.14 Therefore, this mitigation has been taken forward to support the Local Plan growth as it offers significant benefits to junction operation.

6.14 Junction 16 – Museum Road/Landport Terrace/Kings Road/Kings Terrace

6.14.1 This junction (also known as the Kings Road roundabout) is a four arm unsignalised roundabout. Each arm has one entry lane and one exit lane. Pedestrian islands with dropped kerbs and tactile paving are present on all arms. Advisory cycle lanes are present on all approach arms of the roundabout. Bus stops are also present approximately 50m east of the roundabout, on the Kings Road arm and 40m south of the roundabout on the Kings Terrace arm.

Model Validation

6.14.2 The junction model was validated against available SRTM queue data. **Table 39** details the amendments (final capacity adjustment) which have been made to the junction model arms to allow validation to meet the required criteria detailed in **Section 5.3.3.** A 100% value means that no capacity adjustment has been made as junction model data closely matched SRTM data.

Table 39. Junction 16 – Local Model Validation Amendments

ARM	% Capacity Adjustment (AM &PM)
A – Landport Terrace	80% (-20%)
B – Kings Road	100% (No capacity adjustment made)
C – Kings Terrace	95% (-5%)
D – Museum Road	100% (No capacity adjustment made)

6.14.3 The table above shows a capacity adjustment was required to better align with the SRTM queue data on two of the four arms at this junction. Based on the above changes, the junction model queue lengths and SRTM queue lengths matched within a +/- 5 PCU value. No further validation was required, with all junction model queue lengths being within a +/-5 PCU value of SRTM queue lengths following the above capacity adjustments.

Model Results

6.14.4 The junction has been modelled using Junctions 10 software, with the results shown in **Table 40.**

Table 40. Junction 16 Model Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2019 Base						
A – Landport Terrace	0.9	6.35	0.41	4.6	21.13	0.82
B – Kings Road	1.3	5.76	0.54	1.0	7.53	0.47
C – Kings Terrace	3.7	21.69	0.78	4.8	21.74	0.82
D – Museum Road	0.1	11.78	0.04	2.4	19.14	0.70
2041 Baseline						
A – Landport Terrace	1.1	7.48	0.51	2.9	18.02	0.75
B – Kings Road	1.0	6.14	0.50	0.2	4.95	0.15
C – Kings Terrace	5.8	28.48	0.86	4.5	17.96	0.82
D – Museum Road	1.3	11.28	0.51	6.1	29.58	0.87
2041 Do Minimum						
A – Landport Terrace	0.7	6.21	0.41	3.5	19.91	0.78
B – Kings Road	0.7	4.90	0.41	0.0	4.43	0.04
C – Kings Terrace	4.2	19.05	0.86	4.6	18.13	0.82
D – Museum Road	1.1	9.69	0.46	5.1	25.28	0.84

6.14.5 The results show the following:

- 2019 Base Scenario:
  - No arms are operating over capacity in either the AM or the PM peak.
  - Kings Terrace has the highest RFC in the PM peak at 0.82.
- 2041 Baseline:
  - Kings Terrace is approaching capacity in the AM peak with an RFC of 0.86 and a queue of 5.8 PCU (33m). There is 130m worth of stacking space available to the next junction, therefore this level of queueing can be accommodated.
  - Museum Road is approaching capacity in the PM peak with an RFC of 0.87 and a queue of 6.1 PCU (35m). There is 250m worth of stacking space available to the next major junction, therefore this level of queueing can be accommodated.
- 2041 Do Minimum:
  - No arms are operating over capacity in either the AM or the PM peak.
  - RFCs have decreased when compared to the 2041 Baseline scenario. The Kings Terrace RFC has stayed at 0.86 in the AM peak and Museum Road RFC has decreased to 0.84 in the PM peak. The V/C has generally decreased

between the 2041 Baseline and 2041 Do Minimum scenarios on all arms due to less traffic flows using the junction in the 2041 Do Minimum. This is due to rerouting in the Do Minimum scenario (-72 flow difference in the AM peak and -92 in the PM peak) when ravelling to the junction, with more vehicles using Kent Road instead.

6.14.6 This junction operates within capacity across all scenarios, consequently mitigation is not required on the grounds of capacity however mitigation has been considered on the ground of safety. Further detail is provided on this below.

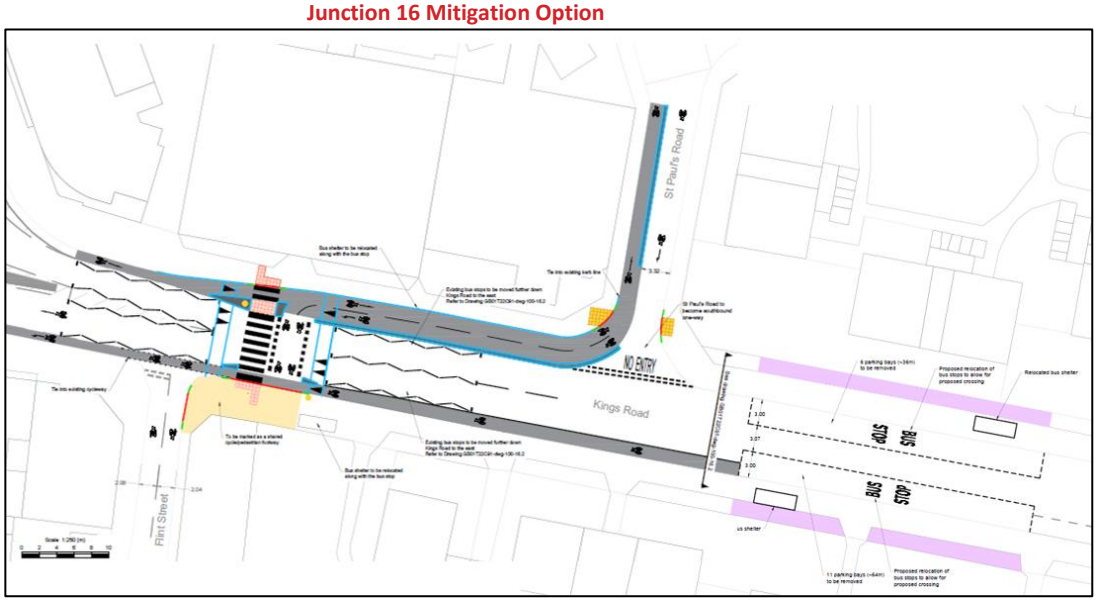
Mitigation Options & Results

6.14.7 It is noted that whilst this junction operates within capacity, PCC has noted cycling safety issues at this junction. In addition, PCC have confirmed that the East West Active Travel Corridor is proposed to the west of the junction and therefore there is an aspiration to route cyclists on a parallel route running north to south along St Pauls Road and Flint Street. There is currently a lack of cycling infrastructure proposed from the junction to this active travel corridor to create a cycling link, further causing safety issues.

6.14.8 Therefore, mitigation at this junction has considered options for a cycling link, connecting Kings Road to the new active travel corridor, as shown in **0** and drawing GB01T22C91-dwg-100-16.1 and GB01T22C91-dwg-100-16.2 of **Appendix H**.

6.14.9 Delivery of the improvement scheme will require the removal of 17 parking bays (shared pay & display/permit holders) and the movement of bus stops/shelters to the east. As a result, a safe cycling route linking the junction with the East West Active Travel Corridor will be provided. Additionally, St Pauls Road will no longer allow for two-way vehicle movements, operating as a one-way link in southbound direction in order to accommodate the required width of the cycle lane. The junction modelling results remain unchanged, as the mitigation is associated with cycling to the east of the junction.

Junction 16 Mitigation Option



6.15 City Centre Road Scheme Junctions

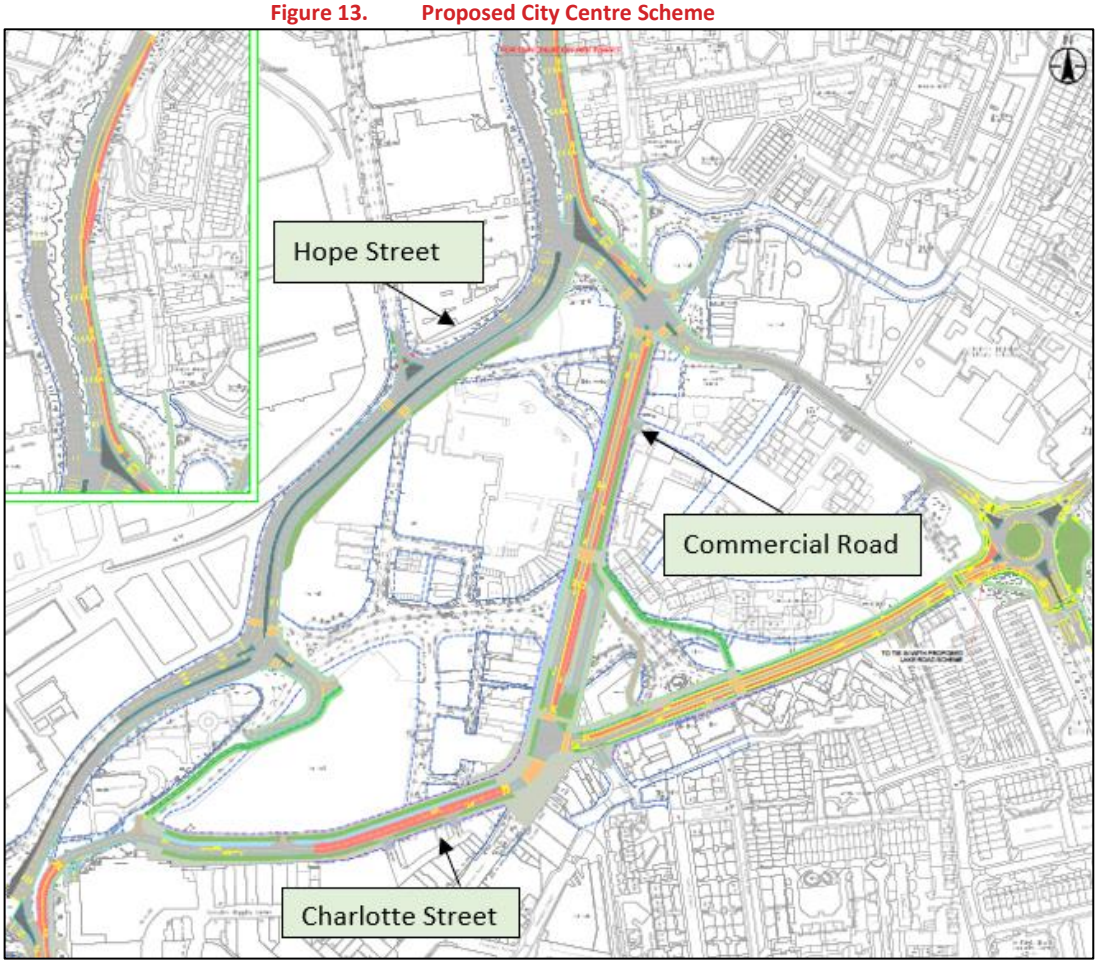
6.15.1 This section highlights the existing results and mitigation options for the following junctions:

- Junction 4 – Church Street Roundabout,
- Junction 6 – Marketway Roundabout,
- Junction 13- Hope Street Roundabout.

6.15.2 These schemes are located within the boundary of the City Centre Road Scheme.

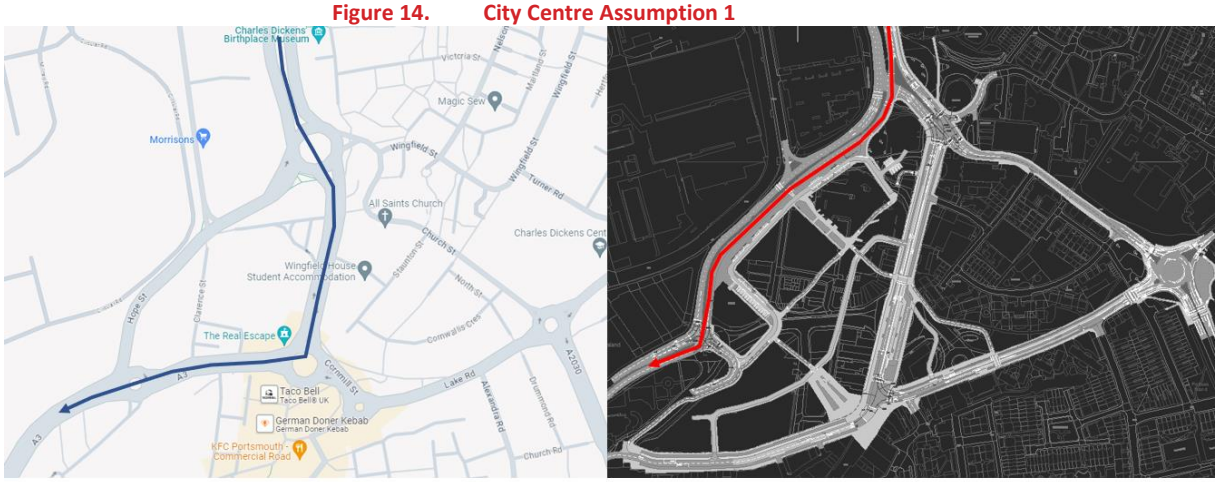
6.15.3 It is noted that PCC have proposed a new road layout for the City Centre. Based on these proposals, the above three roundabout junctions are due to be turned into signalised junctions. **Figure 13** below shows the proposed layout of the City Centre, which can also be found in **Appendix H**.

Figure 13. Proposed City Centre Scheme



6.15.4 As part of the proposals, Cascades Approach is due to be removed, alongside the A3 Marketway Eastern arm. As a result of the proposals, SYSTRA have had to make a number of assumptions as to how existing traffic using the junctions, will use the proposed layouts via re-routing and reassigning traffic. These assumptions are explained in the series of figures below.

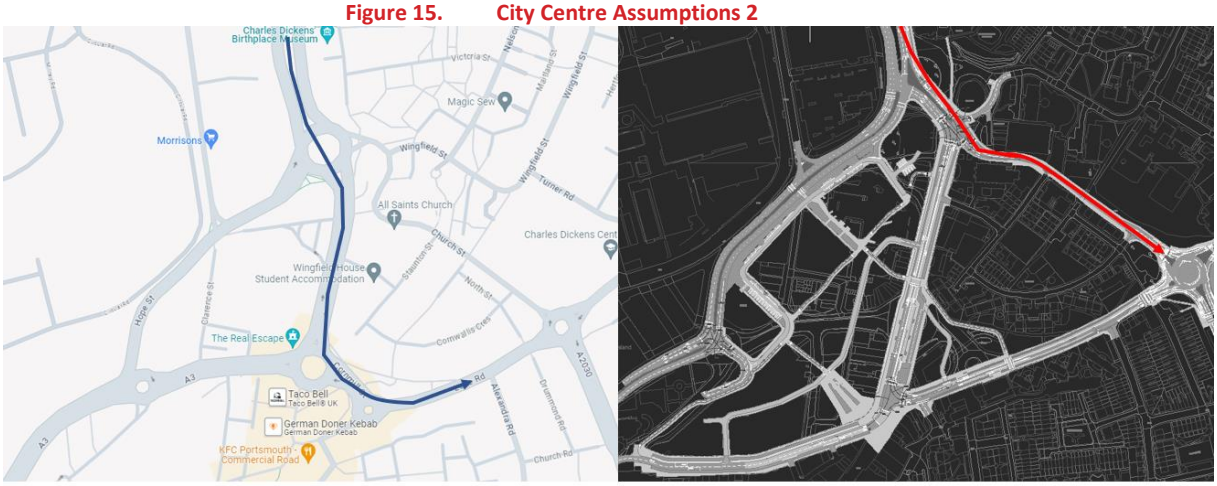
Figure 14. City Centre Assumption 1



Assumptions:

- Mile End Road SB – Commercial Street SB – Marketway WB flows rerouted via Mile End Road – Hope Street SWB movement
- Buses making this SB movement still use Commercial Street
- SB flows on Commercial Street exiting before Marketway Rbt reassigned to Church Street SEB

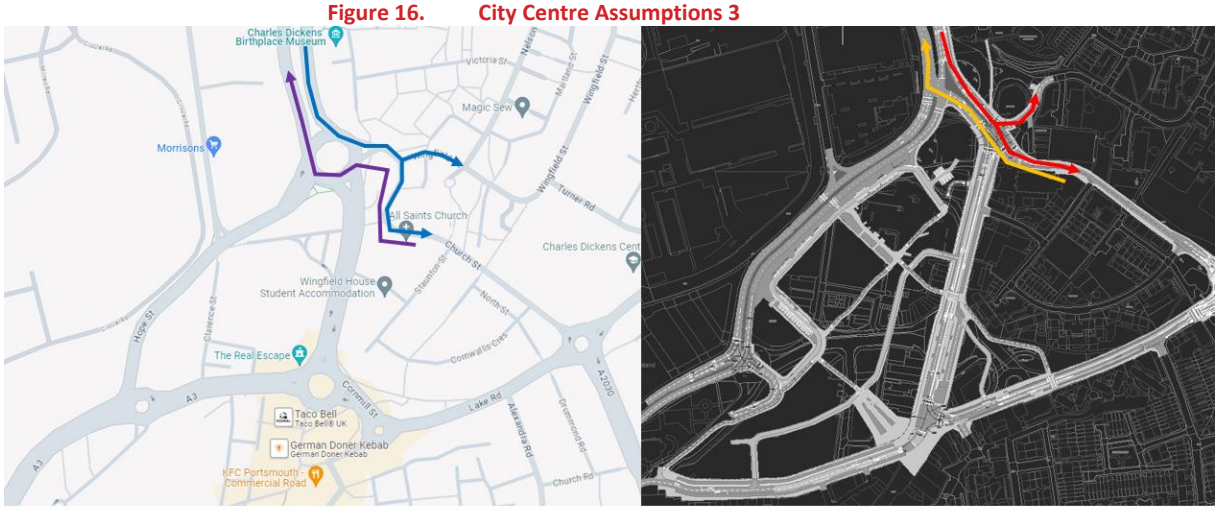
Figure 15. City Centre Assumptions 2



Assumptions:

- Mile End Road SB – Commercial Street SB – Marketway EB flows rerouted via Mile End Road – Church Street SEB movement
- Buses making this SB movement still use Commercial Street
- SB flows on Commercial Street exiting before Marketway Rbt reassigned to Church Street SEB

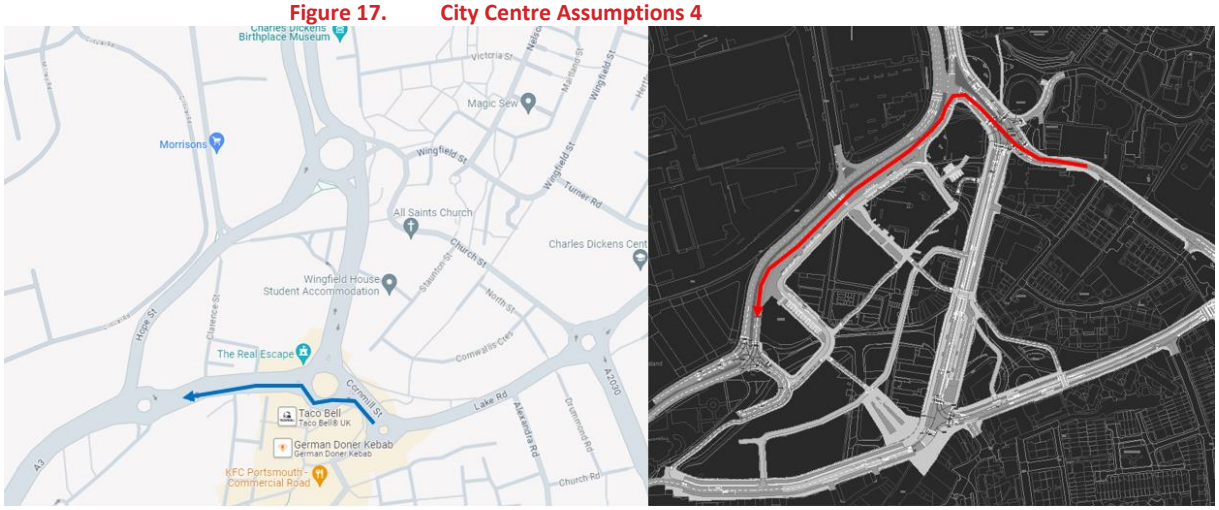
Figure 16. City Centre Assumptions 3



Assumptions:

- Existing Mile End Road SB to Church Street/Wingfield Street flows retained
- Existing Church Street NWB to Mile End Road NB flows retained
- Wingfield Street WB flows assumed to redistribute outside of city centre network

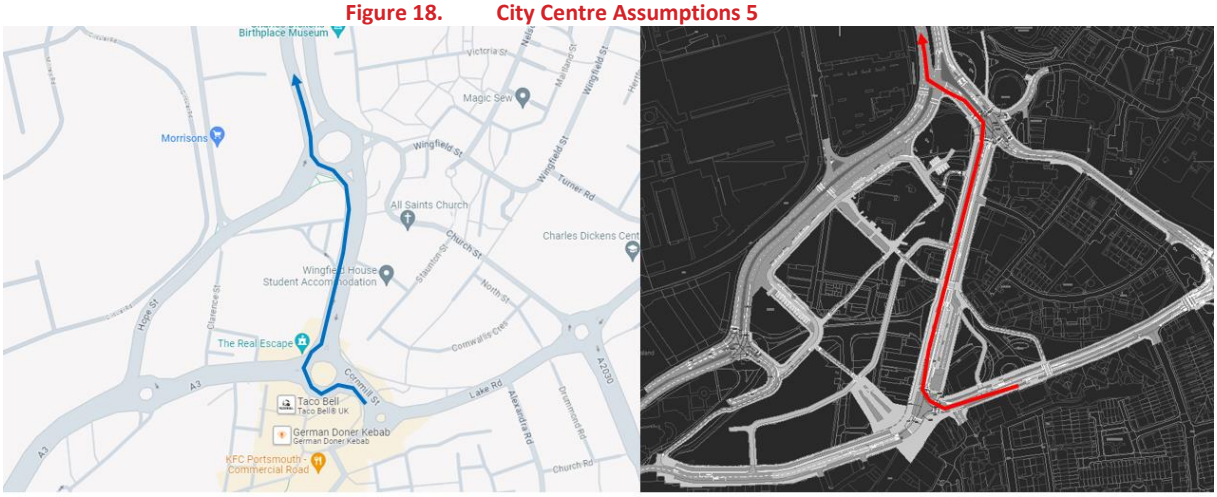
Figure 17. City Centre Assumptions 4



Assumptions:

- Marketway WB traffic redistributed to Church Street NWB – Hope Street SWB

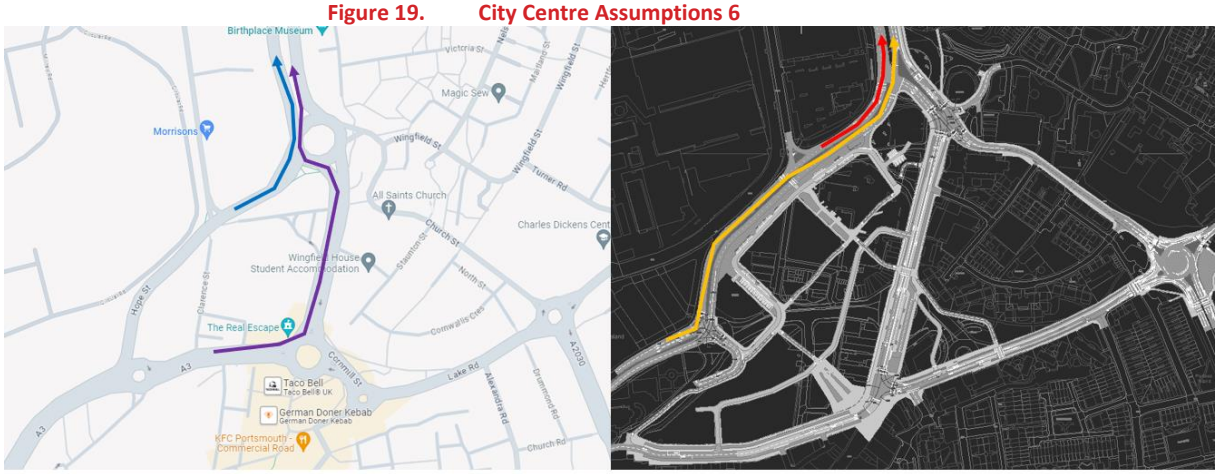
Figure 18. City Centre Assumptions 5



Assumptions:

- Existing Cornmill Street WB to Mile End Road NB flows retained

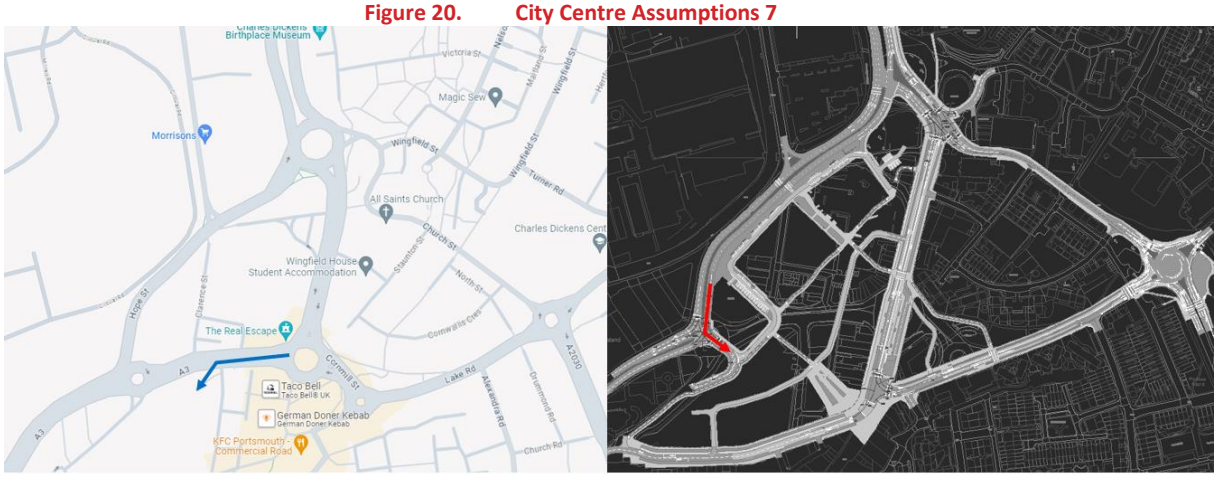
Figure 19. City Centre Assumptions 6



Assumptions:

- Existing Hope Street NWB to Mile End Road NB flows retained
- Existing Marketway WB – Commercial Street NB – Mile End Road NB flows redistributed to Hope Street NWB – Mile End Road NB movement

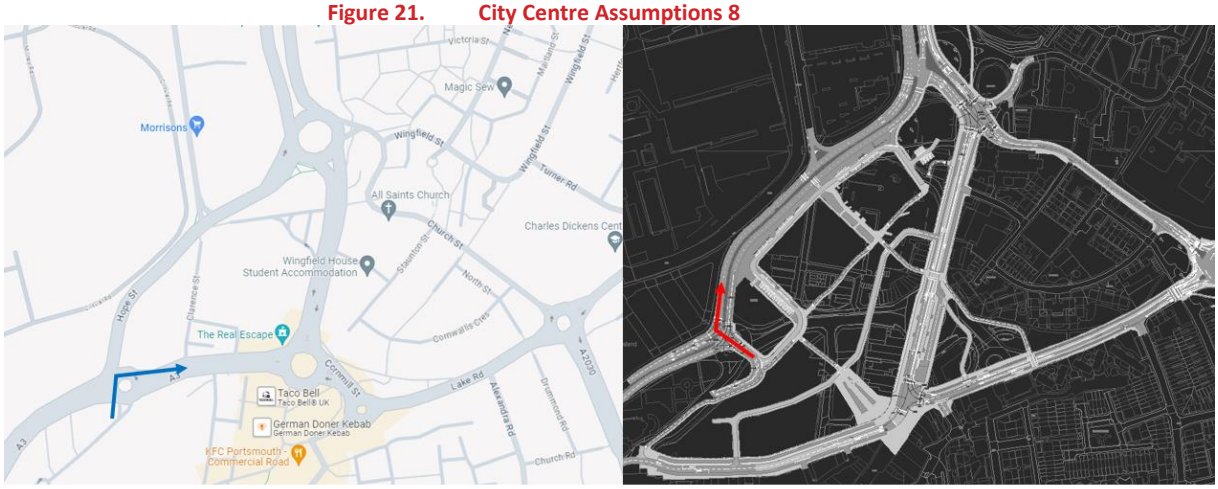
Figure 20. City Centre Assumptions 7



Assumptions:

- Flows formerly accessing NCP Car Park from Marketway roundabout redistributed via Hope Street SWB and into Junction 13 Arm B

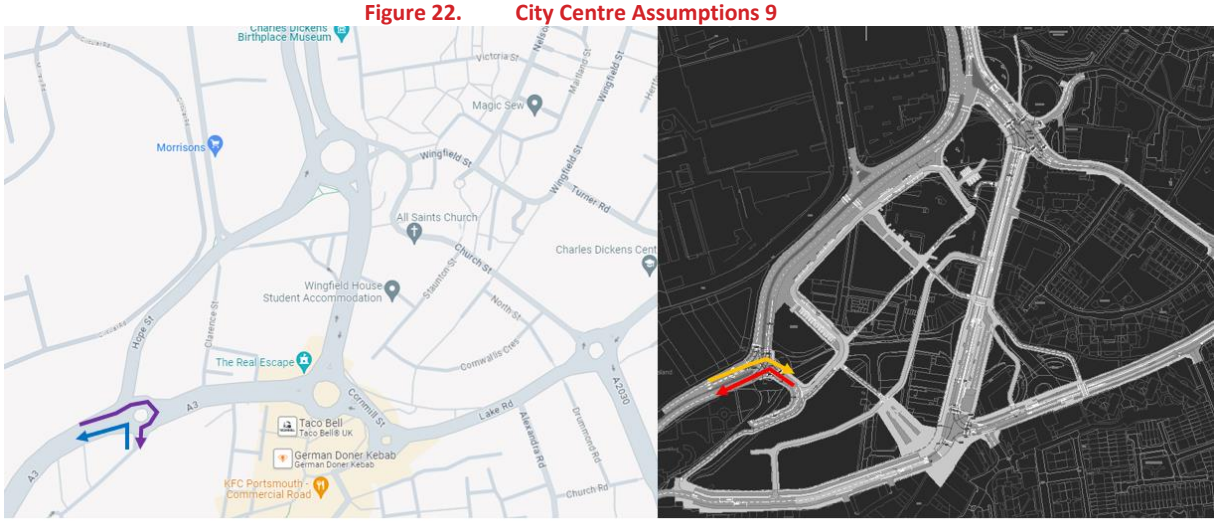
Figure 21. City Centre Assumptions 8



Assumptions:

- Flows formerly exiting Cascades Approach and routing to Marketway EB now redistributed to Hope Street NEB

Figure 22. City Centre Assumptions 9

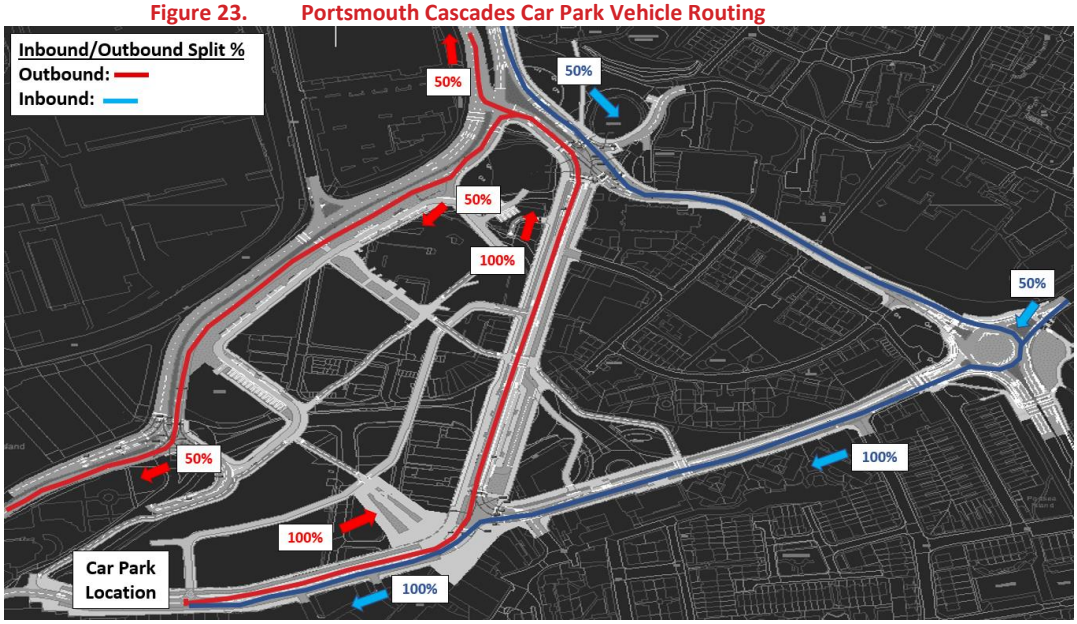


Assumptions:

- Flows formerly exiting Cascades Approach and routing to Marketway WB retained for J13 minor arm
- Flows formerly routing via Marketway EB and entering Cascades Approach retained for J13 minor arm

6.15.5 In addition to the above, access to Portsmouth Cascades will be retained on Charlotte Street. Despite the east side of Charlotte Street becoming bus only as part of the proposals, vehicles accessing the car park only will be allowed to use Charlotte Street to enter and exit the car park only. The routing of vehicles entering and exiting the car park is shown in **Figure 23** below, showing the proportion of vehicles making each turning movement.

Figure 23. Portsmouth Cascades Car Park Vehicle Routing



6.16 Business Case vs Local Plan Modelling Comparison

6.16.1 Modelling to support a Strategic Outline Case (SOC) was undertaken between January 2022 and December 2023, which tested several iterations of highway network layouts as well as wider implications associated with delivery of Local Transport Plan 4 measures and the impact of successful modal shift on network performance in the City Centre. This SOC modelling work preceded the strategic model assessments of the Local Plan allocations, as well as the confirmed scale of the Local Plan allocations hence the local development was constrained to TEMPro, a suitable method for the purpose of the SOC. The analysis and comparison of the results below focuses on the Core City centre road scheme layout which maintains the Cascade approach link and the Sensitivity Test 2 which removes the vehicular access to Cascades approach. Whilst the layout of Sensitivity Test 2 is aligned with the network proposed as part of the Local Plan modelling by removing the vehicle link to Cascades approach, it excludes the signalised junction with Hope Street/Cascades Approach. This means that development trips from the City Centre north allocation access via Commercial Road/ Lake Road/ Charlotte Street. The Local Plan tests a layout which includes elements of both the Core and Sensitivity Test 2 which reflects the long-term aspiration of PCC to support bus priority through the City Centre Road scheme. The strategy for the City Centre Road scheme has evolved since the modelling for the SOC was undertaken, with the longer-term focus being on supporting bus priority, improving bus journey times and encouraging mode shift away from the private vehicle to enable higher level of development to come forward in the City Centre wider area. The Local Plan modelling provides greater level of detail on the completions, permissions and allocated site locations and scale within the modelling, however it only reflects committed transport schemes.

6.16.2 For clarity purposes, a comparison of the city centre road scheme assumptions for the Local Plan TA vs the modelling conducted for the City Centre Road Scheme Business Case is included in **Table 41** below.

Table 41. Local Plan TA vs Business Case Modelling Assumptions

Assumptions	Business Case	Local Plan TA	Additional comments
No. dwellings for allocated city centre sites	1,600	4,176 within the wider City Centre area (2300 at City Centre North site)	Local Plan allocations constrained to TEMPro growth in 2041 Business Case modelling
Car Availability	82% no car 12% part car 6% full car	Default car availability used for all Local Plan Sites, driven by DELTA land use model 10% no car 34% part car 55% full car	
LTP Mode Shift (from Highway to Public Transport & Active Modes)	2026: 4% 2031: 6% 2041: 7%	No static mode shift assumed	Local Plan modelling uses the model to determine penalties for vehicular modes if they are subject to congestion, allows for dynamic mode shift

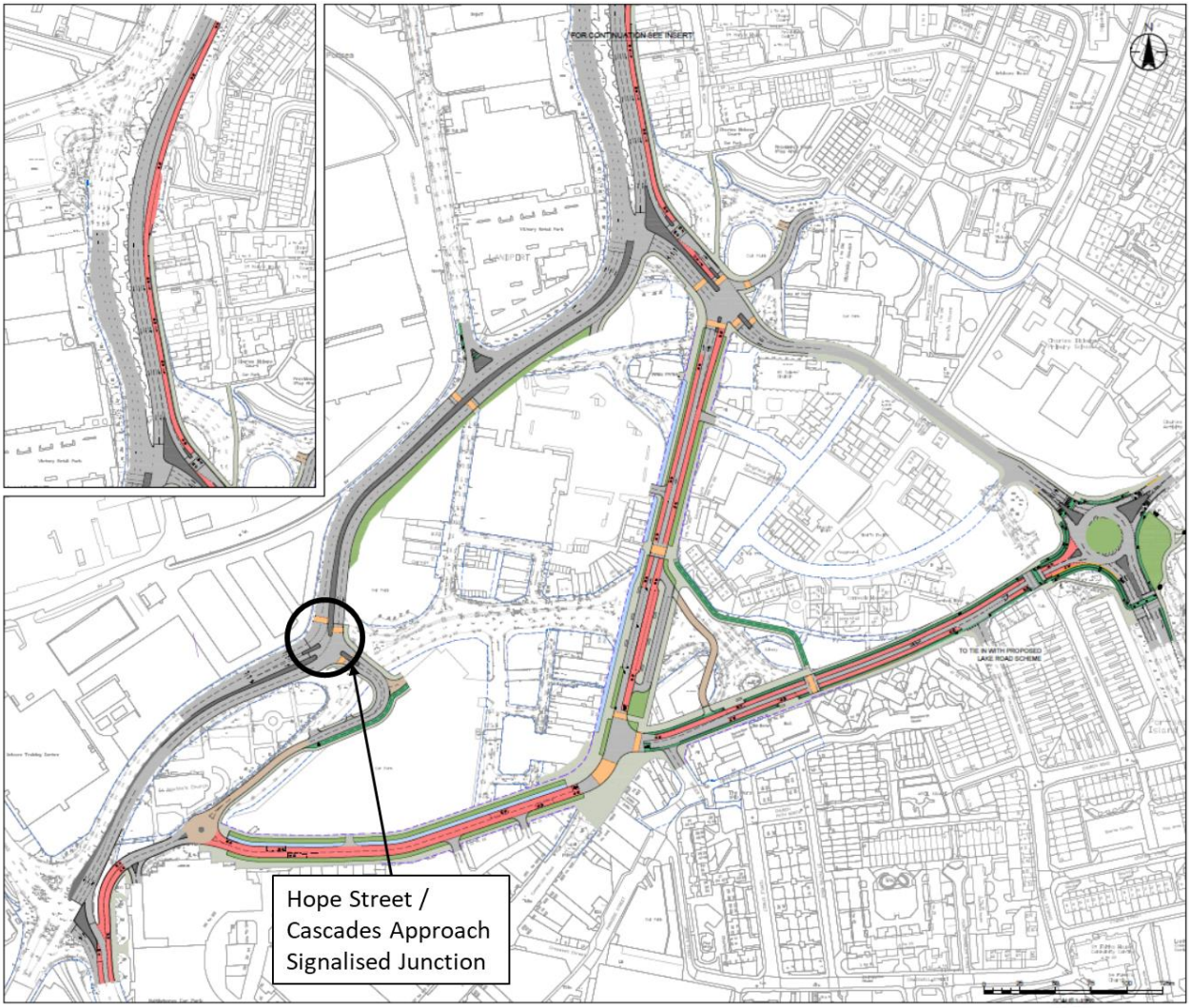
Tipner P&R Site	1.5% of all M275 traffic shifts to use Tipner P&R for all forecast years	No additional P&R mode shift at Tipner P&R site	
BSIP Scheme	Included	Not included – Only committed highway schemes included	Only BSIP highway infrastructure changes implemented in BC modelling

6.16.3 The Local Transport Plan (LTP) mode shift assumptions and the inclusion of the Tipner P&R site in the Business Case modelling comprise the major differences when compared to the Local Plan TA modelling. To represent a robust modelling assessment, the mode share targets applied in the Business Case modelling, which reflect interventions outlined in the Local Transport Plan 4, have not been modelled in the Local Plan due to only factoring committed highway schemes. It is however noted that the subsequent planning applications for Local Plan sites will be encouraged to target the level of mode shift applied in the Business Case modelling within Travel Plans to monitor the level of trip making and support shift to active or sustainable modes, reducing the overall impact on the highway network. This will include ensuring that planning applications within the city centre seek to constrain parking ratios to encourage modal shift, evidenced by the importance of enabling mode shift by comparing the SOC and Local Plan results.

6.16.4 The 2041 Core scenario from the Business Case modelling incorporates a new signalised junction on Hope Street at the approach to the Cascades Shopping Centre at the location of the existing Hope Street roundabout, shown below in **Figure 24**.

6.16.5 The Core scenario records a 0.3% mode shift away from highway vehicles for trips originating in the Portsmouth City Council boundary area. Additional delay is shown at the Hope Street/Cascades Approach signalised junction compared to the Do Minimum.

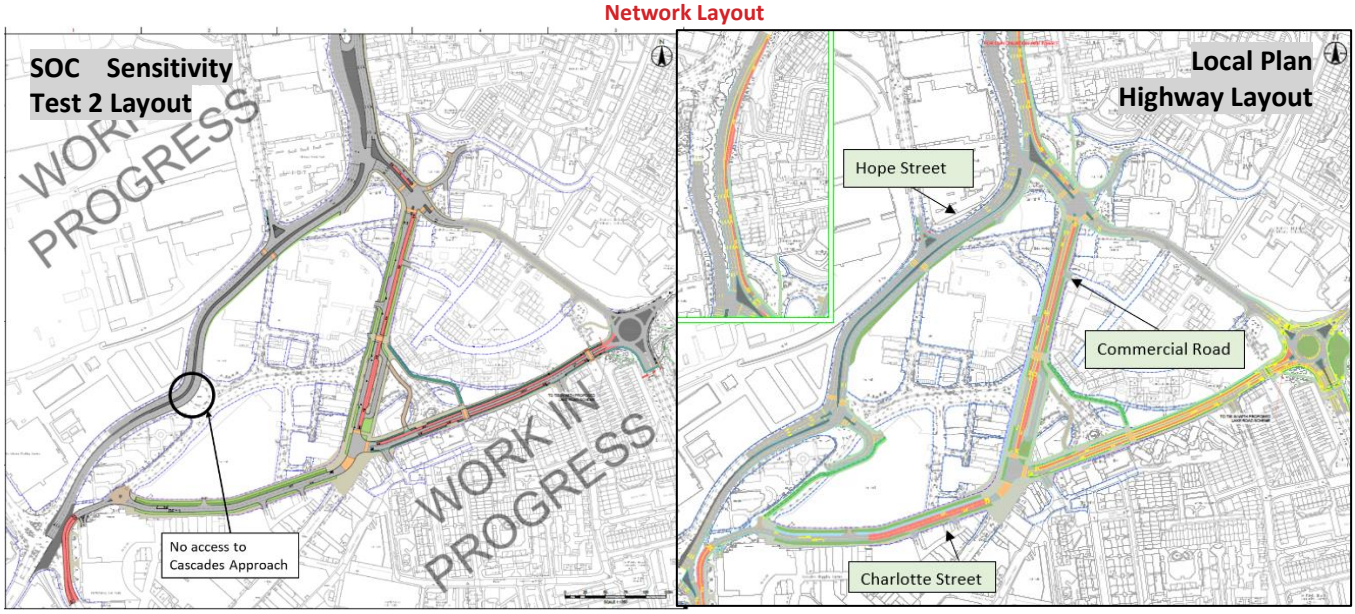
Figure 24. Business Case Modelling – 2041 Core Scenario City Centre Network



6.16.6 It is noted that the Business Case modelling (Core City Network) assumed that, due to low car availability, the majority of vehicle trips using the new signalised junction on Hope Street were for access to Cascades Shopping Centre from the north. The development site itself returned a relatively low number of highway trips due to low car availability.

The Business Case modelling tested an option termed Sensitivity Test 2 which removes vehicle access to Cascades Approach from Hope Street, as shown as a comparison with the Local Plan network in **Figure 25** below.

Figure 25. Local Plan Business Case Modelling – 2041 Sensitivity Test 2 City Centre Network vs Local Plan Highway Network Layout



6.16.7 Removing access to Cascades Approach results in vehicle trips associated with the Cascades Shopping Centre and Development sites rerouting via Lake Road (inbound) and Commercial Road (outbound). The revised network layout results in capacity issues at the new Commercial Road/ Church Street signalised junction which aligns with the results of the Local Plan modelling. The key difference between the highway network is that in the Local Plan TA city centre scheme shown in **Figure 25**, development trips are accessed via a signalised junction on Hope Street, whereas the Sensitivity Test 2 does not provide a signalised junction from Hope Street or vehicle access to Cascades approach, with development trips required to access via Lake Road/ Charlotte Street (inbound) and Commercial Road (outbound). The resultant queue impacts on Hope Street are lower given vehicles are not subject to waiting at a signalised junction with Cascades Approach, however the development trips interact with vehicles on Commercial Road and Charlotte Street due to not having a dedicated development vehicular access to Hope Street.

6.16.8 The Sensitivity scenario records a 0.44% mode shift away from highway vehicles for trips originating in the Portsmouth City Council boundary area. This is 0.14% higher than the Core Scenario due to greater vehicle penalties incurred.

6.16.9 Whilst the Local Plan Modelling shows that the vehicle penalties within the City Centre area result in mode shift to other modes, the model results from the Business Case Sensitivity Test 2, demonstrate that applying the mode shift to reflect the interventions proposed in the Local Transport Plan 4, supports the overall reduction of queue and delays within the city centre area. The focus of the City Centre Road scheme coded in the Local Plan modelling seeks to enhance bus priority within the area due to removal of vehicular access via Cascades Approach as well as minimise the interaction with City Centre development trips. As per wider policy, as detailed in the Local Transport Plan 4 the aspiration for additional measures to support wider mode shift, such as a Sustainable Transport Hub at the Tipner Park and Ride will support the delivery of the City Centre Road Scheme. However, due to funding constraints the Local Plan modelling has tested without the level of mode shift applied in the Business Case modelling. Resultant improvements to mode shift as a consequence of wider

interventions will support the vehicular operation around the City Centre and have further positive impacts on air quality compared to the Local Plan Do Something scenario.

6.16.10 It is noted that there is a number of roads in the city centre where Air Quality modelling has indicated that there will be an expected increase in Nitrous Oxide emissions with the addition of Local Plan development in 2041, including around the Cascades Shopping Centre and Marketway. It is however noted that the existing layout is already over capacity in the 2041 Reference Case with several junctions operating over capacity without the additional benefits arising from the City Centre Road scheme from bus priority routes as well as land reconfiguration to enable the targeted level of development to come forward. This area falls within the Clean Air Zone and therefore it will be a key area to focus on for further monitoring and improvements. Development of the City Centre should encourage low or zero car ownership as well as measures to support modal shift.

6.17 Junction 4 – Church Road Roundabout

6.17.1 Church Street roundabout is a four arm partially signalised roundabout comprising A3 Mile End Road / Church Street / A3 Commercial Road / Hope Street. It connects onto the M275 at the north of the junction, and both the Marketway and Hope Street roundabouts to the south.

6.17.2 The Hope Street arm has two lanes dedicated to the northbound ahead movement present, with no entry into the roundabout, as well as a single right turn lane. All of these lanes are signalised, opposite the signalised southern circulatory. A3 Mile End Road and Commercial Road comprise three lanes on entry, whilst Church Street comprises two lanes on entry. A bus lane is present on the far side lane, to the east of the carriageway extending from the A3 Mile End Road to the Commercial Road arm. A segregated cycle lane is present along the Commercial Road connecting to the toucan crossing on Hope Street. Another toucan crossing in present on Church Street leading to a shared footway/cycleway to the north of Church Street.

Model Validation

6.17.3 The junction model degree of saturation values was validated against available SRTM volume over capacity data. **Table 42** details the amendments which have been made to the saturation flows on the junction model arms to allow validation to meet the required criteria detailed in **Section 5.3.3.** An addition of saturation flow indicates that more vehicles can pass through a signal in any given hour, whilst a decrease in saturation flows indicates less vehicles can pass through a signal in any given hour when compared to a non-validated junction model. Where a lane is not shown in the table, the flows have not been amended.

Table 42. Junction 4 – Local Model Validation Amendments

ARM	Lane	Previous Sat Flow	Amended Sat Flow
A – A3 Mile End Road	3- Nearside	2001	AM & PM Peak: 2200 (+199)
B – Church Street	2- Nearside	1966	AM & PM Peak: 2200 (+234)
	2 - Offside	1951	AM & PM Peak: 2200 (+249)
C – A3 Commercial Road	3- Nearside	1893	AM Peak : 1400 (-493) & PM Peak : 1800 (-93)

	4- Middle	1888	AM & PM Peak: 1400 (-488)
D – Hope Street	3- Nearside	2009	AM & PM Peak: 2200 (+191)
	4- Middle	2142	AM & PM Peak: 2200 (+58)

6.17.4 The table above shows a capacity adjustment was required to better align with the SRTM volume over capacity data on a number of lanes. The highest increase in saturation flow was required on the Church Street for the offside lane. The highest decrease in saturation flow was required during the AM peak on the Commercial Road nearside lane. This change in saturation flows allows the junction model to have a degree of saturation as close as possible for each arm to the SRTM, with any difference being 15 percentage points higher or lower for the majority of arms.

6.17.5 Despite this Arm D DoS has not reached the criteria of being 15 percentage points higher or lower than the SRTM data, with calibration adjustments undertaken based on a reasonable range (saturation flow upper limit 2,200 and lower limit 1,400). No further validation is required as this is noted as a robust adjustment based on increases in a reasonable range, and any further adjustments not being representative and noted as excessive.

Existing Layout Results

6.17.6 The junction in its existing layout has been modelled using LinSig software, with the results shown in **Table 43.**

Table 43. Junction 4 – Existing Layout Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	**Delay (s)**	**Degree of Saturation (%)**	**Queue (PCU)**	**Delay (s)**	**Degree of Saturation (%)**
2019 Base						
A – Hope Street	11.4	16.7	55.9%	13.4	18.5	63.6%
B – A3 Mile End Road	27.2	24.4	87.0%	20.6	19.1	79.7%
C – Church Street	9.0	58.5	86.8%	6.6	54.7	79.4%
D – A3 Commercial Road	0.6	2.1	32.6%	0.7	1.8	36.1%
2041 Baseline						
A – Hope Street	34.8	34.4	88.0%	30.9	33.5	92.0%
B – A3 Mile End Road	57.3	88.4	100.7%	65.7	125.2	104.1%
C – Church Street	32.8	115.8	100.3%	21.9	113.0	100.3%
D – A3 Commercial Road	0.8	2.5	40.9%	1.4	2.3	44.2%
2041 Do Minimum						
A – Hope Street	46.1	38.9	94.1%	32.7	37.1	93.4%
B – A3 Mile End Road	63.8	103.7	102.1%	59.9	103.5	102.7%

C – Church Street	36.4	139.0	102.4%	24.4	128.6	101.6%
D – A3 Commercial Road	0.8	2.2	37.9%	1.5	2.4	44.9%

6.17.7 The results show the following:

- 2019 Base Scenario:
  - No arms are operating over capacity in either the AM or the PM peak.
  - The A3 North (Mile End Road) arm and Church Street arm have the highest DoS in both AM and PM peaks.
  - The A3 North (Mile End Road) arm has a DoS of 87.0% in the AM peak and of 79.7% in the PM peak.
  - The Church Street arm has an AM DoS of 86.8% and a PM DoS of 79.4%.
- 2041 Baseline:
  - The Hope Street AM DoS increases to 88%, resulting in a queue of 34.8 PCUs and the PM DoS increases to 92%, resulting in a queue of 30.9 PCUs.
  - The A3 North (Mile End Road) arm is operating over capacity with an AM DoS of 100.7%, resulting in a queue of 57.3 PCUs (329m), and a PM DoS of 104.1%, resulting in a queue of 65.7 PCUs (328m). There is 350m worth of stacking space available, therefore the queueing does not exceed the available stacking space.
  - The Church Street arm is operating over capacity with a DoS of 100.3% in both peaks, resulting in a queue of 32.8 PCUs (189m) and 21.9 PCUs (126m) during the AM and PM peaks respectively. There is 50m worth of stacking space until the Church Street/Wingfield Street junction, therefore the levels of queues exceed the available stacking space.
- 2041 Do Minimum:
  - The Hope Street AM DoS increases to 94.1%, resulting in a queue of 46.1 PCUs, and the PM DoS increases to 93.4%, resulting in a queue of 32.7 PCUs.
  - The A3 North (Mile End Road) arm is operating over capacity with an AM DoS of 102.1%, resulting in a queue of 63.8 PCUs (367m), and a PM DoS of 102.7%, resulting in a queue of 59.9 PCUs (344m). The AM queueing therefore exceeds the available 350m worth of stacking space available.
  - The Church Street arm is operating over capacity with an AM DoS of 102.4%, resulting in a queue of 36.4 PCUs (209m), and a PM DoS of 101.6% resulting in a queue of 24.4 PCUs (140m). This exceeds the 50m worth of stacking space available in both the AM and PM peaks.

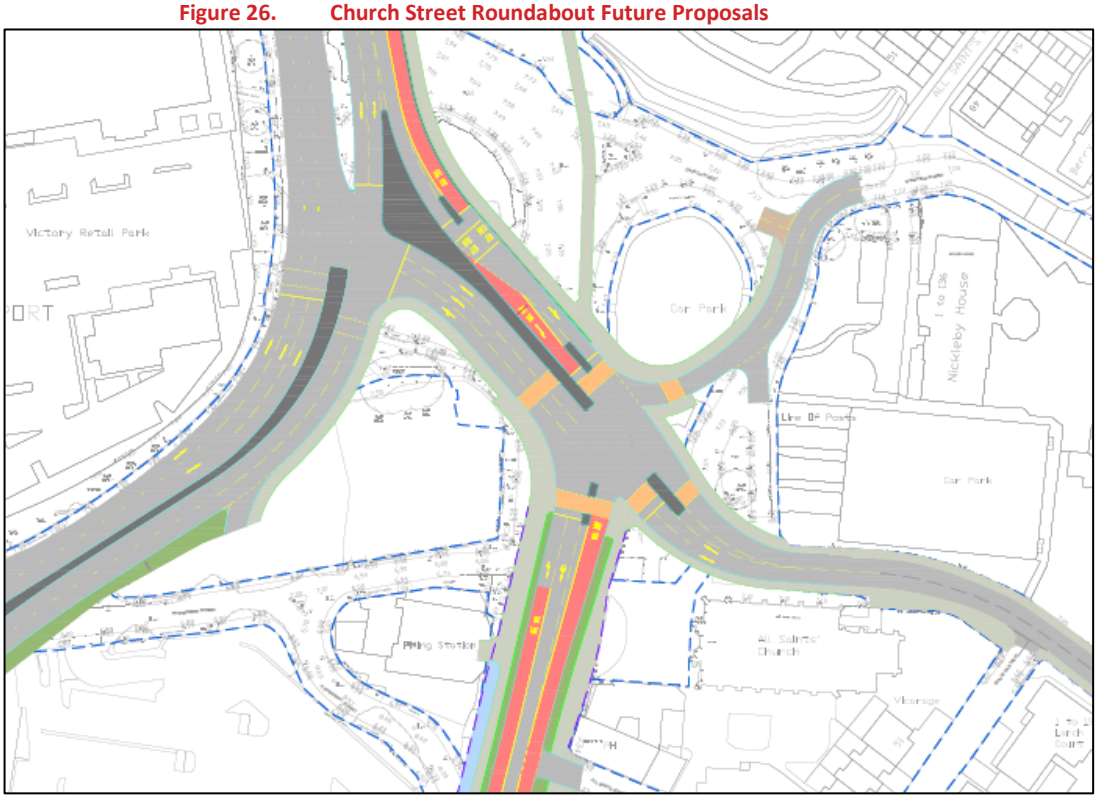
6.17.8 The results show that the junction was already operating over capacity in the 2041 Baseline year, for the A3 North (Mile End Road) and Church Street arm in particular. The DoS increases by 1.4% in the AM peak and decreases in the PM peak for the A3 North (Mile End Road) arm between the 2041 Baseline and 2041 Do Minimum scenarios. The DoS for Church Street increases by 2.1% in the AM peak and 15.6% in the PM peak between the 2041 Baseline and 2041 Do Minimum scenarios. These arms are noted to already be operating above capacity

in the 2041 Baseline scenario, whilst they are operating below capacity in the 2019 Base scenario. This suggests that generally the junction experiences significant congestion in the 2041 Baseline, which is contributing to additional delay through the junction to a much greater extent than the Local Plan traffic itself.

Mitigation Options & Results

6.17.9 As per PCC City Centre scheme proposals, Church Street Roundabout is due to become a four-arm signalised junction. This can be seen in **Figure 26** below (also drawing GB01T23C11-DWG-101-4.1 and B01T23C11-DWG-101-4.2 in Appendix H).

Figure 26. Church Street Roundabout Future Proposals



6.17.10 The junction in its proposed layout has been modelled using LinSig with the results shown in **Table 44**. It is noted that Wingfield street is outbound only, therefore has not been reflected into the junction modelling results.

6.17.11 The 2041 Do Minimum flows have been used to assess the proposed mitigation.

Table 44. Junction 4 City Centre Road Scheme Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	Degree of Saturation (%)	Queue (PCU)	Delay (s)	Degree of Saturation (%)
2041 Do Something						
A- Mile End Road	33.1	14.3	96.2%	41.1	19.7	99.0%
C – Church Street	94.8	252.8	112.5%	57.7	191.3	107.7%

D- Commercial Road	101.1	880.2	171.9%	121.9	679.9	147.0%
E – Hope Street	289.5	557.7	137.4%	222.5	434.8	126.1%

6.17.12 The results show that three arms are operating above capacity, with the highest DoS observed on Commercial Road during the AM peak (171.9%). There is 101.1 PCUs (581m) worth of vehicle queueing with 156m worth of stacking space available. Hence, the queuing significantly exceeds stacking space. In addition, there is a high level of traffic doing the Mile End Road/Hope Street movement due to the closure of A3 Marketway Eastern arm in the existing scenario.

6.17.13 In addition to the above, the DoS is over capacity at the connecting signals from Commercial Road to Hope Street (144.4%). Whilst the Mile End Road connector to Commercial Road for bus only has a DoS of 49.8% in both the AM and PM peak and therefore is operating within capacity, the general traffic connector from Mile End Road to Church Road/Wingfield Street has a DoS of 173.5% in the AM peak and 143.3% in the PM peak.

6.17.14 Consequently, it can be seen that the junction is operating over capacity based on the proposed road layout. However, it is noted that the new layout prioritises sustainable travel modes with bus only lanes and an improvement in cycling and pedestrian infrastructure. With this junction being located in the City Centre, it is envisaged that there will be a level of modal shift to these sustainable modes. This will be discussed in Chapter 8 below, through the results of the SRTM Do Something run, which is able to redistribute flows to sustainable travel modes, based on the level of infrastructure available.

6.18 Junction 6 – Marketway Roundabout

6.18.1 Marketway roundabout is a four arm partially signalised roundabout comprising A3 Marketway / Commercial Road / Cornmill Street. It located in the City Centre and in close proximity to a number of other junctions, including the Church Street roundabout and the Hope Street roundabout.

6.18.2 The Commerical Road north arm has three entry lanes, the Cornmill Street has two entry lanes, the Commerical Road south arm is bus only, with one entry lane and the A3 Marketway arm has one entry lane with a left turn minor flare. A bus lane is present on the far side lane, to the east of the carriageway extending from the A3 Mile End Road to the Commercial Road arm. No pedestrian or cycle crossings are available at the roundabout.

Model Validation

6.18.3 The junction model degree of saturation values was validated against available 2019 queue data. **Table 45** details the amendments which have been made to the junction model arms to allow validation to meet the required criteria detailed in **Section 5.3.3.**

6.18.4 Saturation flows were amended to 1400 for all lanes for the AM and PM peak, however the queues in the junction model did not match the survey queue data. Therefore, the maximum flow while giving way has been amended to match survey data as far as possible, with a range of 25% increase or decrease in flow. The table below reports the highest give way movement

flow and amendment for each lane. Arm D is signalised therefore does not have a give way movement.

Table 45. Junction 6 – Local Model Validation Amendments

ARM	Lane	Previous Max Flow which Gives Way	Amended Max Flow which Gives Way
A - A3 Marketway	1- Nearside	1500	AM & PM Peak: 1125 (-375)
	2- Middle	1000	AM & PM Peak: 750 (-250)
B – Commercial Road N	1- Nearside	1120	AM & PM Peak: 840 (-280)
	2- Middle	1110	AM & PM Peak: 833 (-277)
	3- Middle	1110	AM & PM Peak: 833 (-277)
C – Cornmill Street	1 - Nearside	1000	AM & PM Peak: 750 (-250)
	2 - Middle	1000	AM & PM Peak: 870 (-130)
D- Commercial Road S	NA	NA	NA

6.18.5 Whilst the maximum flow whilst giving way was decreased for all necessary lanes to increase queueing and match the 2019 survey data, the junction model still shows lower queues than the survey data. This could partly be attributed to slow moving queues in an area of high congestion accounted in the survey data, as well as how the junction model is representing driver behaviour. In addition to this, the survey queues used to validate were maximum queues, showing higher queues than on average. Therefore, the junction model queues and consequent validation is representative of average queueing on each arm and no further validation is required.

Existing Layout Results

6.18.6 The junction in its existing layout has been modelled using LinSig software, with the results shown in **Table 46**. It is noted that as Arm D is a bus only lane, no vehicle flows have been modelled for this arm however a green phase with a seven second green time is factored in the modelling.

Table 46. Junction 6 – Existing Layout Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	Degree of Saturation (%)	Queue (PCU)	Delay (s)	Degree of Saturation (%)
2019 Base						
A – A3 Marketway	0.2	1.8	29.8%	0.4	2.6	42.1%
B – Commercial Road North	2.3	6.8	82.1%	11.2	28.7	97.2%
C – Cornmill Street	3.8	45.6	90.4%	7.1	82.4	97.6%
D – Commercial Road South	0.0	0.0	0.0%	0.0	0.0	0.0%
2041 Baseline						
A – A3 Marketway	0.2	1.9	31.1%	0.5	3.0	49.9%

B – Commercial Road North	147.5	85.3	103.0%	230.5	254.2	113.9%
C – Cornmill Street	225.8	1189.9	240.9%	142.7	909.9	180.2%
D – Commercial Road South	0.0	0.0	0.0%	0.0	0.0	0.0%
2041 Do Minimum						
A – A3 Marketway	0.8	3.4	62.3%	1.4	4.8	73.6%
B – Commerical Road North	182.7	166.9	110.1%	244.1	286.1	117.9%
C – Cornmill Street	62.3	679.3	148.2%	52.6	669.6	146.7%
D – Commercial Road South	0.0	0.0	0.0%	0.0	0.0	0.0%

6.18.7 The results show the following:

- 2019 Base Scenario:
  - No arms are operating over capacity in either the AM or the PM peak.
  - The Commercial Road North arm is nearing capacity in the PM peak with a DoS of 97.2%.
  - The Cornmill Street arm is nearing capacity with an AM DoS of 90.4% and a PM DoS of 97.6%.
- 2041 Baseline:
  - The A3 Marketway operates within capacity.
  - The Commercial Road North arm is operating over capacity with an AM DoS of 103.0%, resulting in a queue of 147.5 PCUs (848m), and a PM DoS of 113.9%, resulting in a queue of 230.5 PCUs (1325m). There is 200m worth of stacking space before Church Street Roundabout, therefore the queue exceeds the stacking space.
  - The Cornmill Street arm is operating over capacity with an AM DoS of 240.9% resulting in a queue of 225.8 PCUs (1298m), and a PM DoS of 180.2%, resulting in a queue of 142.7 PCUs (820m). There is 56m worth of stacking space until the Cornmill Street/Lake Road junction, therefore the queue exceeds the stacking space.
- 2041 Do Minimum:
  - The A3 Marketway operates within capacity.
  - The Commercial Road North arm is operating over capacity with an AM DoS of 110.1%, resulting in a queue of 182.7 PCUs (1051m), and a PM DoS of 117.9%, resulting in a queue of 244.1 PCUs (1404m). There is 200m worth of stacking space before Church Street Roundabout, therefore the queue exceeds the stacking space.
  - The Cornmill Street arm is operating over capacity, however the DoS is lower than in the 2041 Baseline Scenario. The AM DoS is 142.8%

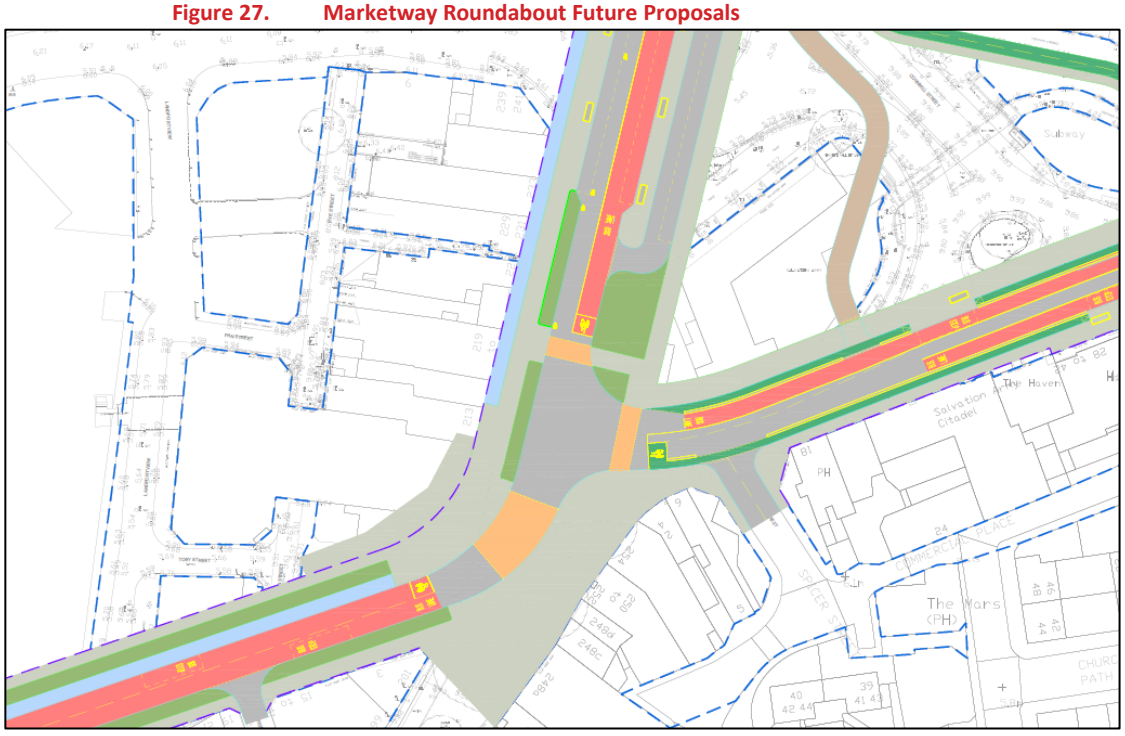
resulting in a queue of 62.3PCUs (358m), and a PM DoS of 146.7%, resulting in a queue of 52.6 PCUs (302m). There is 56m worth of stacking space until the Cornmill Street/Lake Road junction, therefore the queue exceeds the stacking space.

6.18.8 In the 2019 Base, the Commercial Road North and Cornmill Street arms are already nearing capacity. In the 2041 Baseline scenario, these arms operate over capacity. The Commercial Road North arm has a DoS increase of 20.9% in the AM peak and 16.7% in the PM peak between the 2019 Base and 2041 Baseline. The Cornmill Street arm has a DoS increase of 150.5% in the AM peak and 82.6% in the PM peak between the 2019 Base and 2041 Baseline. Between the 2041 Do Minimum and 2041 Baseline scenario, the Commercial Road North DoS increases, however not to the extent as between the 2019 Baseline and Baseline and 2041 Baseline. In addition, the level of traffic on Cornmill Street decreases. This suggests that generally the junction experiences significant congestion in the 2041 Baseline, which is contributing to additional delay through the junction to a much greater extent than the Local Plan traffic itself.

Mitigation Options & Results

6.18.9 As per PCC City Centre road scheme proposals, Marketway Roundabout is due to become a three arm signalised junction. This can be seen in **Figure 27** below (also show in drawing GB01T23C11-DWG-101-6.1in **Appendix H**). Charlotte Street is bus only, with the exception of vehicles entering and existing Portsmouth Cascades car park.

Figure 27. Marketway Roundabout Future Proposals



6.18.10 The junction in its proposed layout has been modelled using LinSig with the results shown in **Table 47**.

6.18.11 The 2041 Do Minimum flows have been used to assess the proposed mitigation.

Table 47. Junction 6 City Centre Road Scheme Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	Degree of Saturation (%)	Queue (PCU)	Delay (s)	Degree of Saturation (%)
2041 Do Something						
A - Commercial Road	2.6	60.8	51.4%	2.6	60.8	51.4%
B – Lake Road	59.8	303.0	114.7%	66.9	395.8	121.4%
C – Charlotte Street	47.6	363.3	118.5%	78.1	456.6	126.8%

6.18.12 The results show that Lake Road and Charlotte Street are operating above capacity, with the highest DoS observed on Charlotte Street during the PM peak (126.8%). There is 78.1 PCUs (449m) of vehicles queueing, with 400m of stacking space available. Hence, the queuing exceeds stacking space. It can be observed that the Charlotte Street high level of queueing and DoS is associated with having both a bus only arm, but also allowing vehicles entering and exiting the car park to use this arm.

6.18.13 Commercial Road is operating within capacity, providing positive benefits on journey times for bus movements through the area.

6.18.14 In comparison to the existing layout, the junction performs better likely due to significant vehicle re-routing due to the bus and access only sections on Charlotte Street limiting through traffic. Similar to the Church Street proposals, it can be seen that the junction is operating over capacity based on the new layout. However, it is noted that the new layout prioritises sustainable travel modes with bus only lanes and an improvement in cycling and pedestrian infrastructure. With this junction being located in the City Centre, it is envisaged that there will be a level of modal shift to these sustainable modes. This will be discussed in Chapter 8 below, through the results of the SRTM Do Something run, which is able to redistribute flows to sustainable travel modes, based on the level of infrastructure available.

6.19 Junction 13 – Hope Street Roundabout

6.19.1 The Hope Street roundabout is a unsignalised three arm roundabout comprising the A3 Marketway East, Cascades Approach and the A3 Marketway West, a route primarily providing access to retail premises and associated car park facilities.

6.19.2 A westbound bus lane is located on the A3 Marketway providing bus priority on entry and exit to the roundabout.

Model Validation

6.19.3 No validation was required at this junction as the SRTM queues and junction modelling queues were within 5 PCUs of each other on all arms. Therefore, the junction model is representative and has provided a robust set of results as junction model and SRTM results match as close as possible.

Existing Layout Results

6.19.4 The junction in its existing layout has been modelled using Junctions 10 software, with the results shown in **Table 48**.

Table 48. Junction 13 – Existing Layout Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2019 Base						
A – A3 Marketway E	2.9	4.87	0.72	3.0	5.08	0.73
B – Cascades Approach	1.9	13.32	0.57	2.2	16.45	0.68
C – A3 Marketway W	0.4	5.43	0.21	0.5	5.49	0.25
2041 Baseline						
A – A3 Marketway E	5.1	7.60	0.82	17.7	24.04	0.95
B – Cascades Approach	3.8	29.09	0.73	4.8	65.36	0.85
C – A3 Marketway W	0.2	3.69	0.15	0.2	4.14	0.19
2041 Do Minimum						
A – A3 Marketway E	82.6	85.69	1.04	140.5	139.89	1.09
B – Cascades Approach	9.1	95.71	0.89	6.6	73.14	0.90
C – A3 Marketway W	0.2	4.40	0.18	0.6	6.40	0.38

6.19.5 The results show the following:

- 2019 Base Scenario:
  - No arms are operating over capacity in either the AM or the PM peak.
  - The highest RFC is observed on the A3 Marketway Eastern arm during the PM peak, at 0.73. Queuing is limited.
- 2041 Baseline:
  - A3 Marketway West operates within capacity.
  - The RFC on the A3 Marketway East increases to 0.95 in the PM peak. Queueing is 17.7 PCUs (101m). There is 175m worth of stacking space available, therefore the queueing is able to fit within the space.
  - Cascades Approach is approaching capacity, with an RFC of 0.85 in the PM peak.
- 2041 Do Minimum:
  - A3 Marketway West operates within capacity.

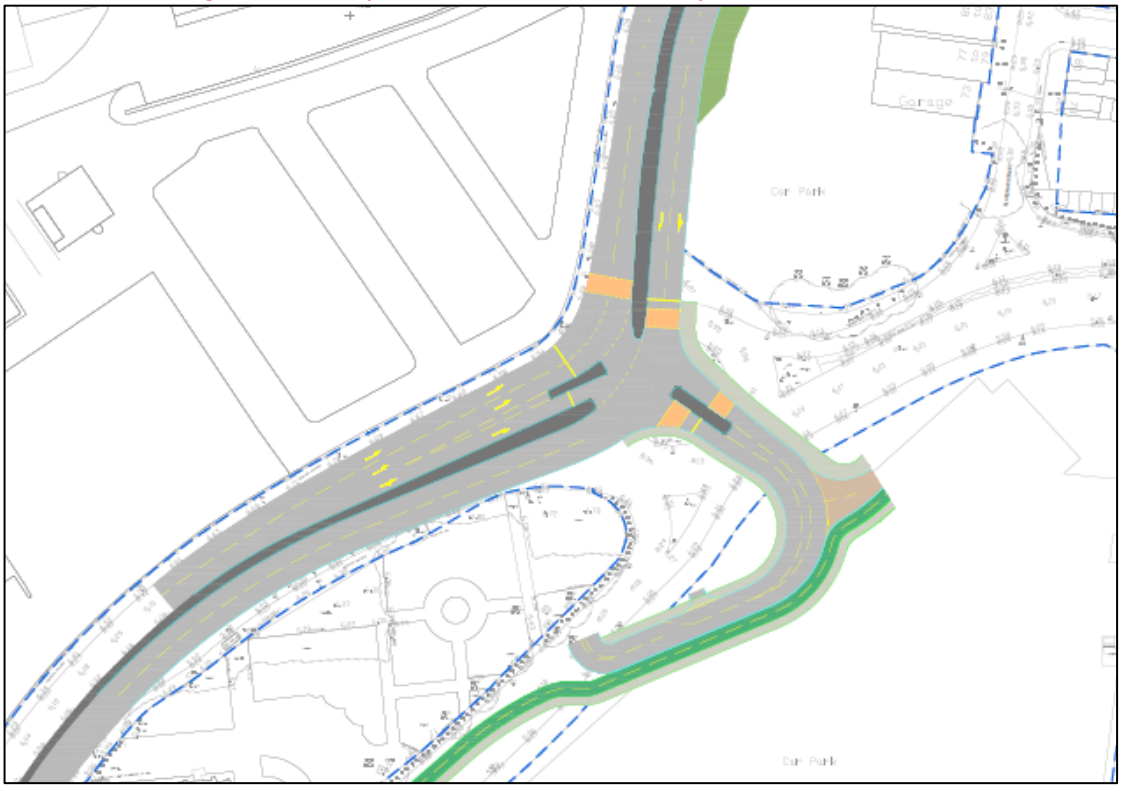
- The RFC on the A3 Marketway East increases to 1.04 in the AM peak and 1.09 in the PM peak. The maximum queueing level is 140.5 PCUs (807m), which exceeds the 175m worth of stacking space available.
- Cascades Approach is approaching capacity in both the AM and PM peak, however queuing is accommodated within the available stacking space.

6.19.6 Overall, the results show that the junction was nearing capacity in the 2041 Baseline and exceeds capacity in the 2041 Do Minimum scenario. There is an increase in RFC of 0.22 on A3 Marketway East during the AM peak and an increase of 0.14 during the PM peak. The RFC increases between the 2019 Base and 2041 Baseline on A3 Marketway East and Cascades Approach. It can be concluded that both background growth and Local Plan growth contribute to increasing the RFC at this junction, however it is recognised that the Local Plan growth is having the greatest impact.

Mitigation Options & Results

6.19.7 As per PCC City Centre scheme proposals, Hope Street Roundabout is due to become a three-arm signalised junction. This can be seen in **Figure 28** below (also in drawing GB01T23C11-DWG-101-13.1 in **Appendix H**). The eastern arm is an access road to the NCP car park.

Figure 28. Hope Street Roundabout Future Proposals



6.19.8 The junction as per the City Centre Road Scheme layout has been modelled using LinSig with the results shown in **Table 49**.

6.19.9 The 2041 Do Minimum flows have been used to assess the proposed mitigation.

Table 49. Junction 13 City Centre Road Scheme Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	Degree of Saturation (%)	Queue (PCU)	Delay (s)	Degree of Saturation (%)
2041 Do Something						
A – Hope Street	185.8	457.8	128.5%	206.2	492.1	131.5%
B – New Access Road	57.1	566.4	134.4%	57.9	609.3	138.4%
C – A3 Marketway W	286.6	598.6	141.9%	262.1	547.1	136.8%

6.19.10 The results forecast that all of the junction arms will operate over capacity. It is noted that under the existing arrangement the two left turn bypass lanes on Hope Street allow for free flowing traffic, whilst vehicles will now have to wait at the stop line due to signalisation leading to greater congestion and queueing.

6.19.11 The highest DoS is observed on A3 Marketway West, at 141.9% in the AM peak. There is 286.8 PCU (1678m) of vehicles queueing on this road, with 230m worth of stacking space available. Therefore, the level of queuing exceeds the stacking space available. Queuing exceeds stacking space available on all arms of this junction during both peak periods. There is a high level of traffic doing the Mile End Road/Hope Street movement due to the closure of A3 Marketway East in the existing scenario.

6.19.12 Consequently, it can be seen that the junction is operating over capacity based on the city centre road scheme layout. However, it is noted that the new layout prioritises sustainable travel modes with bus only lanes and an improvement in cycling and pedestrian infrastructure. With this junction being located in the City Centre, it is envisaged that there will be a level of modal shift to these sustainable modes. This will be discussed in Chapter 8 below, through the results of the SRTM Do Something run, which is able to redistribute flows to sustainable travel modes, based on the level of infrastructure available.

6.20 Conclusion

6.20.1 This chapter has presented the modelling results for those junctions which have been defined as ‘category 1’ and the impacts considered severe in the 2041 Do Minimum SRTM model scenario. The results have been presented for 16 junctions, showing the 2019 Baseline scenario to assess the existing operation, 2041 Baseline scenario with traffic growth and committed development and 2041 Do Minimum scenario which also includes the total Local Plan growth.

6.20.2 Where required, mitigations have been identified in the form of capacity improvements, active travel improvements, access improvements and signalisation. Preferred mitigations have been identified and agreed with PCC to take forward to support the targeted levels of growth in the Local Plan. These preferred mitigations have been fed into the SRTM for a 2041 Do Something scenario run showing the traffic distribution for the wider Portsmouth road network.

6.20.3 For the City Centre schemes, PCC have proposed a new layout to form the City Centre road scheme. This results in significant re-routing of vehicles as a result of the road layout changes which result in all junctions operating over capacity for general traffic, whilst bus modes are prioritised through bus lanes and signal detectors. It is noted that the junctions are forecast to operate significantly over capacity in the 2041 Do Minimum scenario given the level of existing traffic routing through the city centre hence demonstrating the need for a radical intervention. In order to reduce traffic routing through the city centre the emphasis of the city centre scheme looks to support sustainable level travel modes at these junctions which is expected to result in a level of modal shift. Therefore, whilst arms operate above capacity for general traffic, the bus priority lanes are beneficial for the junction; as buses can bypass any congestion.

7 DO SOMETHING SRTM RESULTS

7.1 Overview

7.1.1 This chapter provides an overview of the results of the 2041 Do Something SRTM run, including Local Plan developments and the preferred mitigations proposed in Chapter 7 above. This Do Something run allows traffic distribution across the whole of the Portsmouth network to be analysed, to consider the impacts of vehicle re-routing with mitigations in place.

7.1.2 As with the 2041 Baseline and Do Minimum SRTM results, the series of figures below show data plots which forecast the future operation of the highway network with the Local Plan growth and identified mitigation in place.

7.1.3 Flow difference plots between the Do Minimum (2041) and Do Something (2041) scenarios comprise the following:

- Link Flows – presents the additional traffic flows in Passenger Car Units (PCU) along each link of the network (increase of 50 vehicles or more presented)
- Additional Delay incurred along each link of the network (seconds) (increase of 10 seconds or more presented)

7.1.4 By examining this data it is possible to identify how traffic patterns are expected to change based on mitigations proposed, compared to just Local Plan development. The pink lines on the plots represent increases and the blue lines represent decreases.

7.1.5 Absolute plots for the Do Something (2041) scenario comprising the following:

- Volume/Capacity Ratio – shows the absolute V/C ratio for links >50 (capacity on each link).

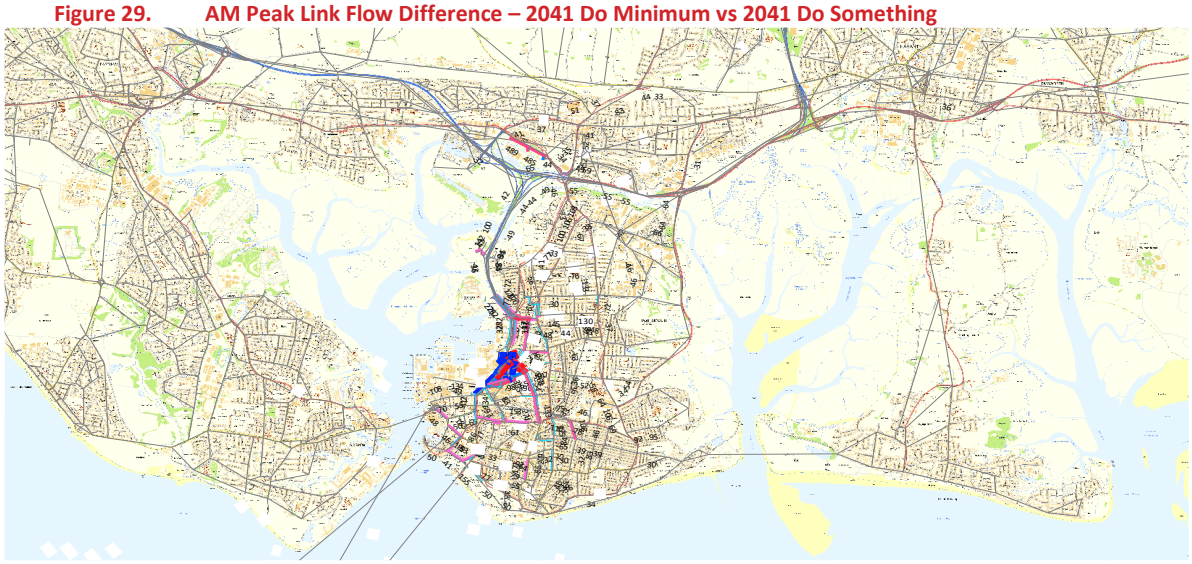
7.1.6 Additionally, in the City Centre where the road layout has significantly altered between the 2041 Do Minimum and 2041 Do Something layout, flow difference plots are not always representative between the highway links and therefore the absolute plots for flows, delay and V/C have been analysed to consider how the future network is forecast to operate with the City Centre road scheme in place.

7.1.7 A full set of the plots from these exercises (at full page size) are included at **Appendix I**. Additional zoomed in plots showing key outputs at key locations is included at **Appendix I** and has been used to assist with analysis of the Do Something model runs.

7.2 AM Peak Data Plots

Link Flow Difference Plot

Figure 29. AM Peak Link Flow Difference – 2041 Do Minimum vs 2041 Do Something

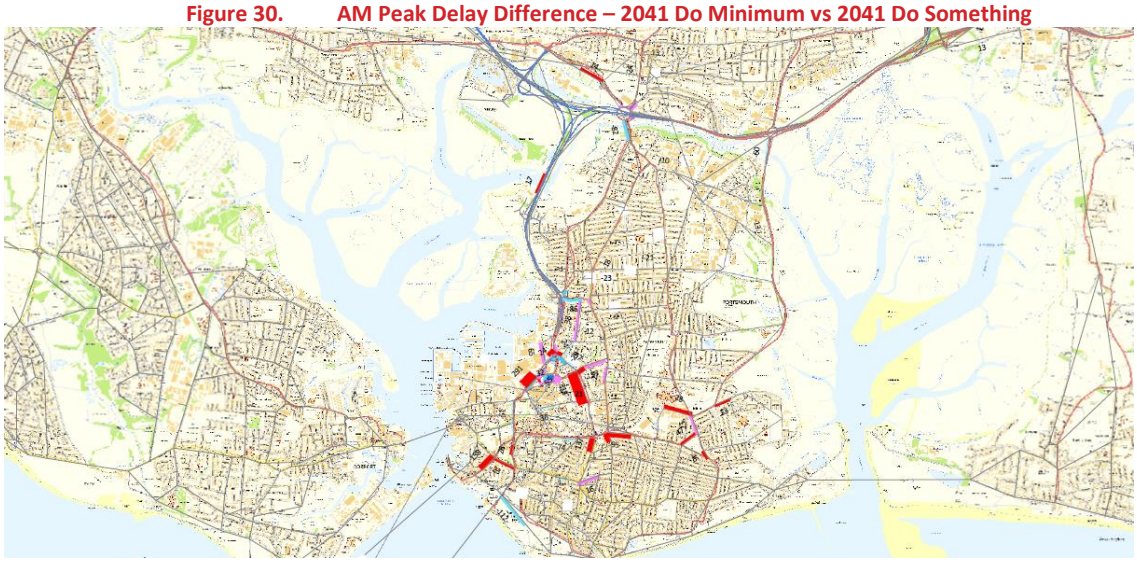


7.2.1 **Figure 29** and the zoomed in plots at Appendix I identifies the following:

- The addition of a secondary access to the Lakeside development is resulting in 479 vehicles shifting from the existing access to the new secondary access, hence resulting in 475 fewer vehicles along the A27 Western Road between the two vehicle access points.
- The level of flow change associated with the partial signalisation of Portsbridge roundabout is relatively modest, however it is noted that 103 additional vehicles exit Portsbridge roundabout via the A3 London Road which leads southbound towards the City Centre. This suggests that the proposed mitigation scheme at Portsbridge Roundabout and the Lakeside secondary access are having the desired effect of avoiding vehicles re-routing away from Portsbridge Roundabout and the Lakeside access roundabout.
- The absolute flow plots for the City Centre show that the dominant movements are along the corridors between A3 Mile End Road and Lake Road (1463 vehicles travelling southbound and 1446 vehicles travelling northbound) as well as along Hope Street and A3 Marketway (1547 westbound and 1376 eastbound). Commercial Road and Charlotte Street flows reflect the new road layout which provides bus priority and prohibits through routes for vehicles, with vehicles only permitted for access to Cascades shopping centre car park. 535 westbound movements and 267 eastbound movements are forecast along Charlotte Street.
- Holbrook Road in the City Centre experiences high flow volumes, with 794 southbound movements and 1318 northbound movements forecast in the Do Something Scenario.

Delay Difference Plot

Figure 30. AM Peak Delay Difference – 2041 Do Minimum vs 2041 Do Something



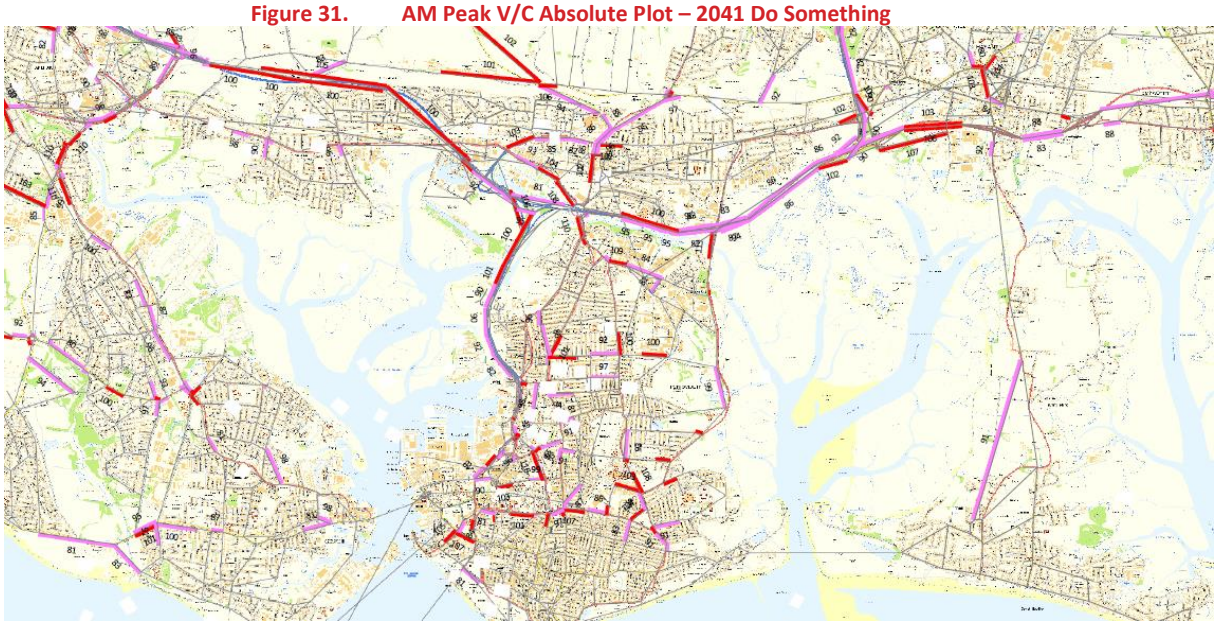
7.2.2 **Figure 30** identifies the following:

- There is a minor increase in delay of 14 seconds for southbound vehicles along the A27 Western Road on approach to the Lakeside roundabout. This minor increase in delay is considered offset with the wider benefits of alleviating pressure from a single point of access particularly in the PM peak.
- There is an increase of delay incurred of between 16 and 21 seconds for the internal circulatory for Portsbridge roundabout. This is to be expected given the introduction of signalisation at the northern section of the roundabout to allow balancing of movements across approach arms.
- There is an increase of delay of 45 seconds on the A397 Northern Road arm. This is expected due to traffic being held back on this approach arm to allow for the signalised bus gate and the internal roundabout circulatory traffic phase.
- There is a decrease in delay of 82 seconds for vehicles on the A3 London Road approach arm (northbound).
- As a result of the Rudmore roundabout scheme there is a decrease in delay of 119 seconds along Kingston Crescent due to signalisation of this arm. Additionally, the A3 Stamshaw Road observes a decrease in delay of 141 seconds. Whilst there is an increase in delay around the circulatory of 42 seconds due to the signalisation, this is offset by improvements on the approach arms.
- A 60 second delay reduction occurs on the A2030 Eastern Road upon approach to the A2030 Eastern Road/Havant Bypass junction. This is likely associated with a slight reduction of vehicles (64) utilising this route in the AM peak.
- In terms of absolute delay incurred within the City Centre, the A3 Marketway northbound is subject to a 292 second delay on approach to the new signalised junction providing one of the points of access to the City Centre strategic development site.
- There is a significant delay of 400 seconds for vehicles exiting Commercial Road, as well as 215 seconds for vehicles travelling southbound on approach to the junction with Charlotte Street.

- Holbrook Road experiences significant delay, with the northbound vehicles on approach to the Lake Road junction experiencing a delay of 324 seconds. This is likely attributed to the high flow volumes using this route and continuing north to Church Street/ Hope Street signalised junction.
- The delays forecast along Charlotte Street are all below 35 seconds.

V/C Absolute Plot

Figure 31. AM Peak V/C Absolute Plot – 2041 Do Something



7.2.3 **Figure 31** identifies the following:

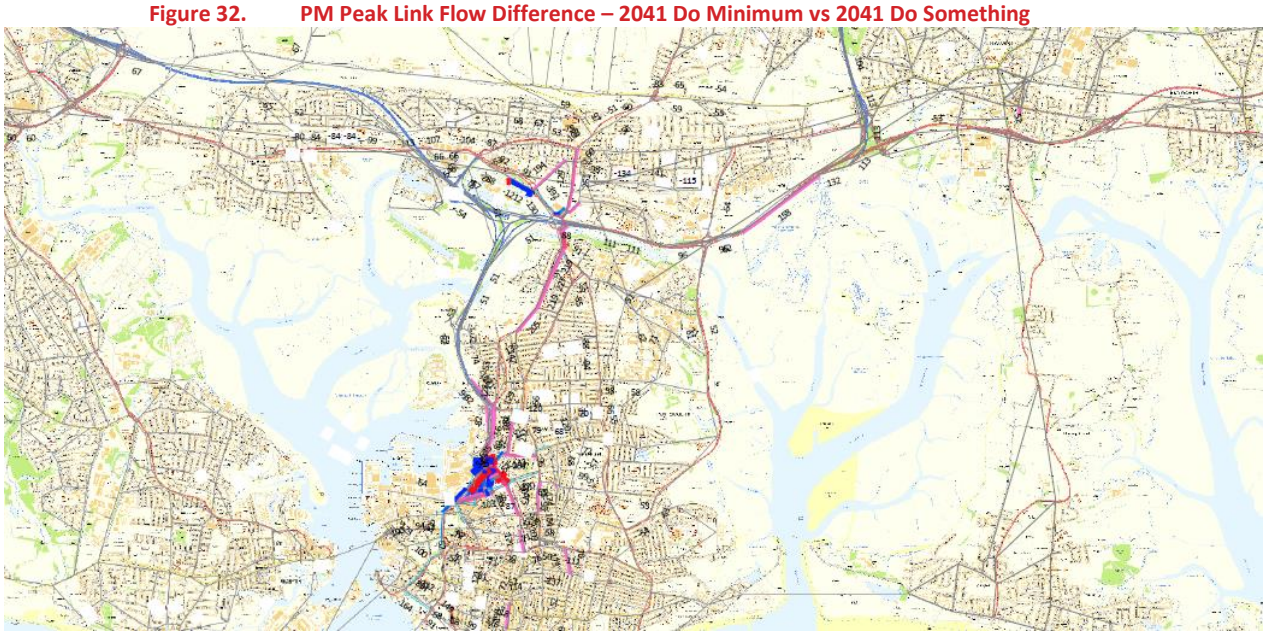
- There is no material change in V/C along the SRN mainline between the 2041 Do Minimum and 2041 Do Something scenario.
- A slight reduction in V/C is forecast on the A3 London Road northbound approach to Portsbridge roundabout from 111 to 110. The M27 off-slip, the A397 Northern Road and A27 Western Road are all operating within capacity. A greater volume of vehicles may be attracted to route via Portsbridge roundabout compared to the Do Minimum scenario due to reduced congestion at the Lakeside Access.
- The A27 Western Road northbound approach to the Lakeside access has reduced in V/C from 111 to 108, due to vehicles exiting via the secondary access hence alleviating pressure at the Lakeside access roundabout.
- Several junctions within the City Centre are proposed to operate with a V/C ratio of over 100, and these correspond with the links seeing the greatest increases in delay as discussed above. The highest V/C is observed on Holbrook Road with a V/C on the northbound approach to the junction with Lake Road of 116. Commercial Road experiences a V/C of 114 and a delay of 400 seconds. The link has a bus priority lane and it will be important to ensure that buses do not incur significant delay as an impact of vehicle flows from the Cascades shopping centre access. It will be important to consider how the signals at the Commercial Road junction can prioritise the bus priority lanes to minimise journey time delays to buses.

- The A3 Marketway northbound approach to one of the signalised City Centre development access points, has a V/C of 112 and therefore queues build during this time period resulting in additional delay.
- A high V/C of 101 is forecast between the two proposed signalised junctions on Church Street. Queue build up could lead to significant issues in this location given the very limited stacking space between the junctions.

7.3 PM Peak Data Plots

Link Flow Difference Plot

Figure 32. PM Peak Link Flow Difference – 2041 Do Minimum vs 2041 Do Something



7.3.1 **Figure 32** identifies the following:

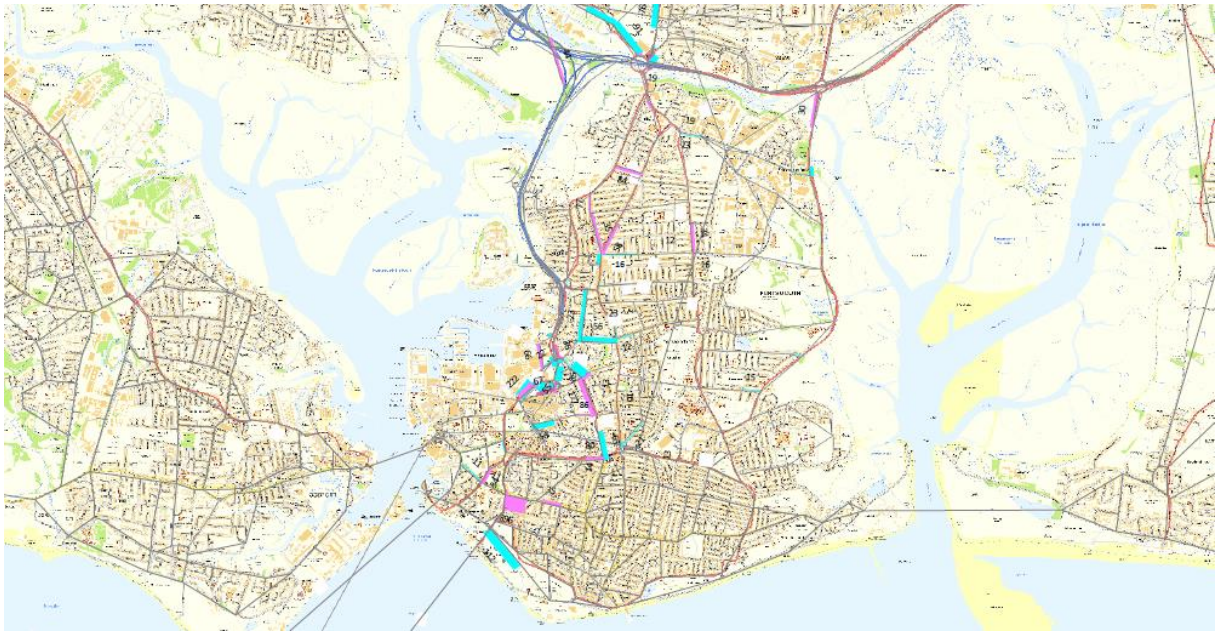
- There is a significant decrease in flows (-1212) travelling on the A27 Western Road northbound exit arm from the Lakeside roundabout in the PM peak. This is attributed to the proposed secondary access on the A27 Western Road, with approximately 1300 vehicles using the new proposed Lakeside access which is further west than the current access hence the reduction.
- The secondary access links to there being a decrease in trips travelling to Portsbridge roundabout (-393 southbound on Northern Road), with vehicles more likely to use the M275 J12 to travel to the SRN or the city compared to Portsbridge roundabout, due the location of the proposed new exit.
- The absolute flow plots for the City Centre show that the dominant movements are along the corridors between A3 Mile End Road and Lake Road (1448 vehicles travelling southbound and 1484 vehicles travelling northbound) as well as along Hope Street and A3 Marketway (1855 westbound and 1770 eastbound). Generally, the flows through the City Centre road scheme are higher in the PM peak compared to the AM peak. Commercial Road and Charlotte Street flows reflect the new road layout which provides bus priority and prohibits through routes for vehicles, with vehicles only permitted for access to Cascades shopping centre car park. 369

westbound movements and 282 eastbound movements are forecast along Charlotte Street.

- Holbrook Road in the City Centre experiences high flow volumes, with 1167 southbound movements and 1467 northbound movements forecast in the Do Something Scenario.

7.3.2 Delay Difference Plot

Figure 33. PM Peak Delay Difference – 2041 Do Minimum vs 2041 Do Something



7.3.3 **Figure 33** identifies the following:

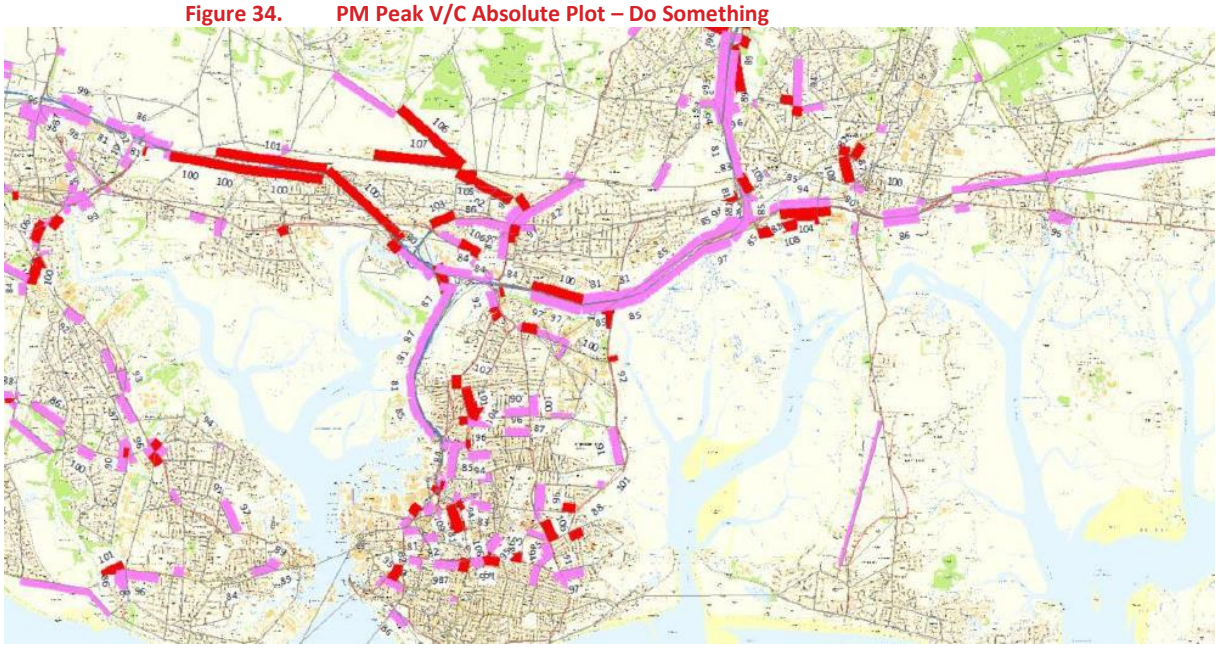
- There is a significant decrease in delay (-78 seconds) for the Lakeside Access roundabout, on the southbound A27 Western Road arm. This is due to the proposed secondary access which allows for left turn entry/exit, reducing congestion closer to the roundabout with significantly less vehicles using the existing Lakeside access to exit the development.
- There is a decrease in delay of 91 seconds between the Lakeside access roundabout to Portsbridge roundabout, due to reduced flows along this link. It is noted that the short link after the removed left turn bypass has an increase in delay (192 seconds) associated with signalisation of Portsbridge and the removal of the left turn bypass. Any queues here are not reported to impact the operation of the adjacent Lakeside access roundabout.
- An increase in delay has occurred at the bus lane feeding into Portsbridge roundabout, however upon delivery the signals could operate with bus priority detectors to ensure the green phase for buses is prioritised. There is a decrease in delay of 112 seconds along the A397 Northern Road.
- A decrease in delay is observed on the A2030 Eastern Road southbound movement, associated with the A2030 Eastern Road/Havant Bypass junction. It can be observed that potentially less vehicles are using this route to access the city centre,

and are using Portsbridge Roundabout instead, with vehicles choosing to the more direct routes via the M275 and the A3, due to mitigations in place.

- In terms of absolute delay incurred within the City Centre, the A3 Marketway northbound is subject to a 223 second delay on approach to the new signalised junction providing one of the points of access to the City Centre strategic development site.
- There is a significant delay of 296 seconds for vehicles exiting Commercial Road, with only a 32 second delay incurred for vehicles travelling southbound on approach to the junction with Charlotte Street.
- Holbrook Road experiences significant delay, with the northbound vehicles on approach to the Lake Road junction experiencing a delay of 182 seconds. This is likely attributed to the high flow volumes using this route and continuing north to Church Street/ Hope Street signalised junction. For vehicles travelling westbound along Lake Road upon approach to the roundabout with Holbrook Road, a delay of 143 seconds is forecast.
- The maximum delay forecast along Charlotte Street is 67 seconds in the eastbound direction.

V/C Absolute Plot

Figure 34. PM Peak V/C Absolute Plot – Do Something



7.3.4 **Figure 34** identifies the following:

- There is no material change in V/C along the SRN mainline between the 2041 Do Minimum and 2041 Do Something scenario.
- There is an increase in V/C on the A27 Western Road arm southbound into the Lakeside access roundabout from a V/C of 101 to 106. The A27 Western Road northbound approach to the Lakeside roundabout operates within capacity with a V/C of 91.

- Portsbridge roundabout is operating within capacity due to partial signalisation and a level of re-routing of Lakeside flows towards the M27 Junction 12, due to the new secondary left turn exit at the strategic site. At Portsbridge roundabout the highest V/C on the approach arms is 92 on the A3 London Road northbound arm a slight increase from 89 in the Do Minimum Scenario. The M27 off-slip has a V/C below 50, however the link between the left bypass and the roundabout is showing a V/C of 101 over this short link length as per the Do Minimum scenario.
- Several junctions within the City Centre are proposed to operate with a V/C ratio of over 100, and these correspond with the links seeing the greatest increases in delay as discussed above. The highest V/C is observed on Holbrook Road with a V/C on the northbound approach to the junction with Lake Road of 109. Commercial Road experiences a V/C of 109. The link has a bus priority lane and it will be important to ensure that buses do not incur significant delay as an impact of vehicle flows from the Cascades shopping centre access. It will be important to consider how the signals at the Commercial Road junction can prioritise the bus priority lanes to minimise journey time delays to buses.
- The A3 Marketway northbound approach to one of the signalised City Centre development access points, has a V/C of 108 and therefore queues build during this time period resulting in additional delay.
- A high V/C of 101 is forecast between the two proposed signalised junctions on Church Street. Queue build up could lead to significant issues in this location given the very limited stacking space between the junctions.

7.4 Do Something SRTM Results Summary

7.4.1 Overall, it can be seen that the preferred mitigations impact the trip distribution across the Portsmouth network positively, especially in the PM peak due to the addition of a Lakeside left turn exit only onto the A27 Western Road northbound. As Lakeside is assigned as an employment based strategic site for development, higher level of vehicles will be exiting during the PM peak, then travelling to M27 J12.

7.4.2 The Portsbridge roundabout partial signalisation is having the desired effect of balancing any impacts between the local and strategic road network and minimising re-routing of vehicles away from Portsbridge and the Lakeside access roundabout to avoid delay.

7.4.3 The City Centre Road scheme results in significant re-routing of vehicles associated with the proposed new road layout and certain routes restricting through routes for vehicles. As modelled, the scheme does result in congestion issues at certain junctions, particularly associated with the two signalised junctions along Church Street, with the southbound Church Street approach arm and the Commercial Road arms incurring V/C over 100 and resultant delay. Additionally, the eastbound movement along A3 Marketway experiences significant congestion on approach to one of the new signalised site access points. Holbrook/ Lake Road roundabout experiences congestion and delay in both the AM and PM peak scenarios. The delay along Commercial Road in particular will need to consider the impact for bus journey times to ensure the benefits of the scheme with bus priority are materialised. There is a slight level of reduction in flows within the city centre road scheme boundary compared to the 2041 Do Minimum scenario, as a level of the person trips are opting for non-highway-based modes in the demand model due to the level of delay incurred. Therefore, it can be concluded that overall less vehicles are travelling in this area during both the AM and

PM peaks; potentially due to wider re-routing as well as a level of modal shift from improved sustainable transport infrastructure in 2041. It is noted that given the reported delays within the city centre, in reality higher levels of modal shift to active or sustainable modes may occur due to congestion for vehicles. It is noted that the City Centre Road scheme is required in order to release the land to enable the level of development growth to come forward within this strategic site allocation. Additionally, if no changes were made to the existing highway layout high levels of queuing and delay are incurred even in the 2041 Reference Case (without Local Plan growth) and this increases further in the 2041 Do Minimum scenario (with Local Plan growth). As referenced in Section 6.16 the wider measures to support mode shift such as the Sustainable Transport Hub at the Tipner Park and Ride, identified in the Local Transport Plan 4 will help to drive down the reported queues and delays within the City Centre area by fewer private vehicle trips and further support the benefits gained from improved bus priority through the City Centre network.

7.4.4 Overall, this chapter has presented the impact of the preferred mitigations identified in the junction modelling stage on the Portsmouth transport network, from a holistic view considering wider distribution impacts.

8 COST ESTIMATES

8.1 Overview

8.1.1 A costing exercise has been carried out on the latest junction mitigation design drawings for a number of junctions associated with a mitigation (Junction 2 Portsbridge Roundabout, Junction 3 Spur Road Roundabout, Junction 7 Rudmore Roundabout, Junction 8 Lakeside Access, Junction 15 London Road/Southwick Hill Road and Junction 16 A3 Kings Road). For Junction 2 and 3, costs for both the preferred and other considered options have been provided. Note that the City Centre scheme is a PCC designed scheme and therefore has not been costed for.

8.1.2 Given the level of design that has been carried out at this stage, the costings are not based on take-offs that form a Bill of Quantities. For each junction, we have placed a value against each Series based on previous experience in relation to junctions of similar size and nature that we have delivered.

8.1.3 **Table 50** overleaf provides a breakdown of the cost estimates for the proposed mitigation scheme designs.

8.2 Cost Estimation

8.2.1 The cost estimates have been split into three parts, firstly a works estimate based on identified costs for construction works. Further to this, additional uplifts have been added to make allowance with costs associated with the project outside of the physical works. Finally, Optimism Bias has been identified to cover any further unknown costs.

8.3 Works Estimate

8.3.1 The following design series or discipline items have been assessed, these series relate to the Design Manual for Roads and Bridges (DMRB) series and are limited to those series that was felt there was sufficient information in the designs at this stage to be able to provide a quantity for based on the benchmarking process.

- 100 Series - Preliminaries
- 200 Series - Site Clearance
- 500 Series - Drainage
- 700 Series - Pavements
- 1100 Series - Kerbs, Footways and Paved Areas
- 1200 Series - Traffic Signs and Road Markings
- 1250 Series - Traffic Signals
- 1300 Series - Street Lighting
- Utilities
- Other

8.4 Uplifts outside of physical works

Contractor's Profit

- An allowance has been made for 7% Contractor's profit on top of the works estimate.

Risk

- Risk has been identified at 40%, this is standard practice for designs at this level of detail.

Inflation

- Inflation has been included in the calculations as it is assumed that this will be accounted for in indexation rates to be agreed.

Design

- A 15% uplift has been included to account the potential cost of fully designing the proposed mitigations.

Optimism Bias

8.4.1 We have provided costs including allowances for Optimism Bias. This is to redress the tendency of being optimistic about the project, therefore we have to make explicit, empirically based adjustments to the estimates of a project's costs, benefits, and duration. The 3% is the Lower band figure for Capital Expenditure Optimism Bias as stated in Table 1 of the Supplementary Green Book Guidance. 44% is the Upper band figure which is what we have suggested should be used to provide a better estimate of the likely capital costs and to provide an element of contingency due to the number of unknowns.

8.4.2 We have, in addition, rounded up the "Total" values to 5 figure sums (the nearest £10,000) which will build in a small amount of further contingency.

8.5 Assumptions and Exclusions

8.5.1 To provide of these estimates, the following assumptions/exclusions were also made:

- Earthworks – only excavation of road box (no major embankments or cutting assumed)
- Drainage – only surface water drainage required
- In areas where the proposed carriageway coincides with existing carriageway, resurfacing to be undertaken only where significant road marking changes are required
- Exclusion of Design, supervision fees
- Exclusion of Land purchase costs
- Exclusion of Legal fees
- Excluded any environmental investigations and mitigation
- Exclude any further survey work – GPR surveys for all of these would be 6-figures
- Lack of availability of accurate 3D topographical survey information
- Lack of Geotechnical information
- Third Party Land requirements/restrictions
- Major maintenance requirements being identified during design
- Traffic Management has been accounted for in the costing however this is an assumption and would be subject to change depending on the requirements by the LHA

- VAT was not included in the costing analysis

8.5.2 If further detail/information is required, we can carry out take-offs based on our design however, we feel given the high-level design at this stage, there would be no further surety on the costings and therefore there would still be significant assumptions, caveats and risks at this stage of the project. To provide a further robust cost estimate, further design would have to be undertaken to the detailed stage with suitable topographical survey, Site Investigation undertaken, 3D design, C3 utility quotations and to finalise signal and signage requirements. This will provide further detail on earthworks and utility costs/implications and highlight any further issues that maybe raised from receipt of the additional information and in turn provide further surety of the total costs.

Table 50. Mitigation Scheme Cost Estimates

		Junction 2 Postbridge Roundabout (Full Signalisation)	Junction 2- Postbridge Roundabout (Two-arms Signalisation, Preferred)	Junction 2 - Postbridge Roundabout (Northern Road arm Signalisation)	Junction 3 - Spur Road Roundabout Preferred)	Junction 3 - Spur Road Roundabout (Option 2)	Junction 7 - Rudmore Roundabout	Junction 8 - Lakeside Access (up to pedestrian crossing)	Junction 15 - London Road	Junction 16 - A3 King's Road
100 - Preliminaries		£ 108,000.00	£ 108,000.00	£ 108,000.00	£ 36,000.00	£ 72,000.00	£ 36,000.00	£ 108,000.00	£ 9,000.00	£ 36,000.00
200 - Site Clearance		£ 19,719.00	£ 19,719.00	£ 19,719.00	£ 21,600.00	£ 31,338.00	£ 5,400.00	£ 66,600.00	£ -	£ 21,600.00
500 - Drainage		£ 29,400.00	£ 29,400.00	£ 29,400.00	£ 10,080.00	£ 18,480.00	£ -	£ 84,000.00	£ -	£ 19,320.00
700 - Pavements		£ 383,040.00	£ 383,040.00	£ 383,040.00	£ 133,056.00	£ 133,056.00	£ 50,400.00	£ 729,000.00	£ -	£ 65,376.00
1100 - Kerbs, Footways & Paved Areas		£ 3,600.00	£ 3,600.00	£ 3,600.00	£ 13,860.00	£ 39,972.00	£ -	£ 157,920.00	£ -	£ 12,096.00
1200 - Traffic Signs and Road Markings		£ 55,224.00	£ 55,224.00	£ 55,224.00	£ 7,200.00	£ 9,000.00	£ 3,840.00	£ 4,848.00	£ 1,080.00	£ 960.00
1250 - Traffic Signals		£ 810,000.00	£ 450,000.00	£ 270,000.00	£ -	£ 180,000.00	£ 270,000.00	£ -	£ -	£ 30,000.00
1300 - Steet Lighting		£ 9,000.00	£ 9,000.00	£ 9,000.00	£ -	£ 12,000.00	£ -	£ 21,000.00	£ -	£ -
Utilities		£ 50,000.00	£ 50,000.00	£ 50,000.00	£ 20,000.00	£ 50,000.00	£ -	£ 150,000.00	£ -	£ 50,000.00
Other		£ -	£ -	£ -	£ 10,000.00	£ 10,000.00	£ -	£ -	£ -	£ 15,000.00
Work Estimate		**£ 1,467,983.00**	**£ 1,107,983.00**	**£ 927,983.00**	**£ 251,796.00**	**£ 555,846.00**	**£ 365,640.00**	**£ 1,321,368.00**	**£ 10,080.00**	**£ 250,352.00**
Design Fee (15%)		£ 220,197.45	£ 166,197.45	£ 139,197.45	£ 37,769.40	£ 83,376.90	£ 54,846.00	£ 198,205.20	£ 1,512.00	£ 37,552.80
Contractors Profit (7%)		£ 102,758.81	£ 77,558.81	£ 64,958.81	£ 17,625.72	£ 38,909.22	£ 25,594.80	£ 92,495.76	£ 705.60	£ 17,524.64
Risk (40%)		£ 716,375.70	£ 540,695.70	£ 452,855.70	£ 122,876.45	£ 271,252.85	£ 178,432.32	£ 644,827.58	£ 4,919.04	£ 122,171.78
Sub-total		£ 2,507,314.96	£ 1,892,434.96	£ 1,584,994.96	£ 430,067.57	£ 949,384.97	£ 624,513.12	£ 2,256,896.54	£ 17,216.64	£ 427,601.22
Inflation (3years @ 2%)		£ 153,467.73	£ 115,832.16	£ 97,014.37	£ 26,323.58	£ 58,109.96	£ 38,225.20	£ 138,140.12	£ 1,053.80	£ 26,172.62
Total (ex VAT)		**£ 2,670,000.00**	**£ 2,010,000.00**	**£ 1,690,000.00**	**£ 460,000.00**	**£ 1,010,000.00**	**£ 670,000.00**	**£ 2,400,000.00**	**£ 20,000.00**	**£ 460,000.00**
Optimism Bias (at 44%)		**£ 1,174,800.00**	**£ 884,400.00**	**£ 743,600.00**	**£ 202,400.00**	**£ 444,400.00**	**£ 294,800.00**	**£ 1,056,000.00**	**£ 8,800.00**	**£ 202,400.00**
Optimism Bias (at 3%)		**£ 80,100.00**	**£ 60,300.00**	**£ 50,700.00**	**£ 13,800.00**	**£ 30,300.00**	**£ 20,100.00**	**£ 72,000.00**	**£ 600.00**	**£ 13,800.00**

9 SUMMARY & CONCLUSION

9.1 Context and Overview

9.1.1 This Strategic Transport Assessment (STA) has been prepared by SYSTRA on behalf of Portsmouth City Council to provide an evidence base for the emerging PCC Local Plan for Regulation 19 Consultation Stage.

9.1.2 PCC is developing a Local Plan for Portsmouth, showing future development strategic sites and site allocations. The plan will set out the strategy for meeting future development needs in the city for the period up to 2040. Once adopted, the Local Plan will replace policies in existing planning policy documents and form the basis for taking decisions on planning applications.

9.1.3 This assessment has evaluated the impact of the development sites and site allocations on the surrounding transport network.

9.1.4 PCC have a number of strategic sites and site allocations identified for development, associated with the Local Plan.

9.2 SRTM Model Assessment

9.2.1 This STA uses the Sub Regional Transport Model (SRTM) to assess the traffic growth associated with the proposed developments for the Local Plan.

9.2.2 The following scenarios has been included in the SRTM for both the AM (07:00-10:00) and PM (16:00-19:00) network peaks. It is noted that 2041 is the closest scenario year available in the SRTM to align with the 2040 Local Plan period. For Portsmouth, only growth up to 2040 will be included.

- Scenario 1: 2019 Base - Current SRTM Base Model
- Scenario 2: 2041 Baseline - No Local Plan development within Portsmouth except for committed sites
- Scenario 3: 2041 Do Minimum - Full Local Plan development without transport mitigation
- Scenario 4: 2041 Do Something - Full Local Plan development with transport mitigation

9.2.3 Flow difference plots between the Baseline (2041) and Do Minimum (2041) scenarios have been presented for the following for both the AM and PM peak periods:

- Link Flows – presents the additional traffic flows in Passenger Car Units (PCU) along each link of the network (increase of 50 vehicles or more presented).
- Additional Delay incurred along each link of the network (seconds) (increase of 10 seconds or more presented).

9.2.4 Absolute plots for the Do Minimum (2041) scenario comprising the following for both the AM and PM peak periods:

- Volume/Capacity Ratio – shows the absolute V/C ratio for links >50 (capacity on each link).

Do Minimum SRTM Model

9.2.5 As set out within Chapter 4, comparison of the 2041 Do Minimum and 2041 Baseline model results allow for the impact of the Local Plan growth on the operation of the highway network to be assessed. The SRTM model reviews focused on the vehicle flow changes, delay differences and resultant changes in V/C at junctions and key links. Notable findings from the 2041 Baseline to 2041 Do Minimum modelling review include:

- Lakeside Access – elements of rerouting in this area due to congestion caused by the Lakeside strategic site with significant growth in vehicle trips seeking to use a single point of access to/from the site. This is a particular issue in the PM peak;
- Portsbridge roundabout – elements of rerouting and delay at this roundabout due to the increased flow and congestion from the Lakeside roundabout. Vehicles are observed using alternative routes such as the M275 to enter the City Centre, due to the congestion at Portsbridge.
- City Centre- the City Centre strategic site increases traffic flows in the area, which causes congestion and delays and subsequent re-routing from impacted junctions.

9.3 Junction Modelling Assessment

9.3.1 Based on the SRTM results above, junctions for further consideration at junction modelling stage have been classified as experiencing either a “severe” or “significant” impact in the 2041 Do Minimum scenario (with Local Plan growth), based on the following criteria – the junctions have to meet all the stated criteria to be classified as severe or significant. Severe junctions were those taken forward for further investigation and potential mitigation (known as Category 1 junctions).

- **Severe**: Volume/Capacity >95%; and Difference between the Do Minimum and Baseline V/C of at least 10%; and
- **Significant**: Volume/Capacity >85%; and Difference between the Do Minimum and Baseline V/C of at least 5%.

9.3.2 16 junctions were noted at Category 1 junctions. The local junction modelling results have been presented for the 2019 Base, 2041 Baseline and 2041 Do Minimum scenarios; highlighting which arms of junctions operate over capacity and may require mitigation. Not all 16 junctions were identified as requiring mitigation, with local junction modelling assessments for certain junctions showing limited capacity issues or upon review certain locations had limited physical opportunities for mitigation.

9.3.3 After a series of mitigation optioneering testing, SYSTRA identified a number of preferred mitigations for junctions operating over capacity/ for junctions where there is a major safety issue. PCC committed schemes were also considered. These are detailed in Section 7 of the report, and summarised below:

- Junction 2 Portsbridge Roundabout – Signalisation of A397 Northern Road arm, bus gate and opposing circulatory and signalisation of Western Road arm and opposing circulatory;
- Junction 3 Spur Road Roundabout - Circulatory reduced to two lanes and segregated cycle tracks on Southampton Road and Spur Road alongside introduction of a cycle crossing.
- Junction 7 Rudmore Roundabout: Signalisation of Kingston Crescent and associated circulatory;
- Junction 8 Lakeside Access: Add a secondary access to the northwest of the Lakeside development site (left turn exit and entry only);
- Junction 15 London Road / Southwick Hill Road: London Road Southbound offside lane to be allocated as right turn only and signal staging optimised;
- Junction 16 Museum Road/Landport Terrace/Kings Road/Kings Terrace: through cycle link on Kings Road, east of the junction linking with the East West Active Travel Corridor; and
- Junction 4 Church Street Roundabout/ Junction 6 Marketway Roundabout / Junction 13 Hope Street Roundabout: PCC proposed a new layout of the City Centre road network, with these roundabouts proposed to be signalised junctions.

9.4 Do Something SRTM Model

9.4.1 The preferred mitigations identified in the junction modelling analysis, have been coded into the SRTM for a with mitigation run. The results show that the preferred mitigations impact the trip distribution across the Portsmouth network positively, especially in the PM peak due to the addition of a Lakeside left turn exit only onto the A27 Western Road northbound.

9.4.2 The City Centre Road scheme results in significant re-routing of vehicles associated with the proposed new road layout and certain routes restricting through routes for vehicles. As modelled, the scheme does result in congestion issues at certain junctions, particularly associated with the two signalised junctions along Church Street, with the southbound Church Street approach arm and the Commercial Road arms incurring V/C over 100 and resultant delay.

9.4.3 The delay along Commercial Road in particular will need to consider the impact for bus journey times to ensure the benefits of the scheme with bus priority are materialised.

9.4.4 There is a slight level of reduction in flows within the city centre road scheme boundary compared to the 2041 Do Minimum scenario, as a level of the person trips are opting for non-highway-based modes in the demand model due to the level of delay incurred. Therefore, it can be concluded that overall less vehicles are travelling in this area during both the AM and PM peaks; potentially due to wider re-routing as well as a level of modal shift from improved sustainable transport infrastructure in 2041. It is noted that given the reported delays within the city centre, in reality higher levels of modal shift to active or sustainable modes may occur due to congestion for vehicles. It is noted that the City Centre Road scheme is required in order to release the land to enable the level of development growth to come forward within this strategic site allocation. Additionally, if no changes were made to the existing highway layout high levels of queuing and delay are incurred even in the 2041 Reference Case (without Local Plan growth) and this increases further in the 2041 Do Minimum scenario (with Local Plan growth). As referenced in Section 6.16 the wider measures to support mode

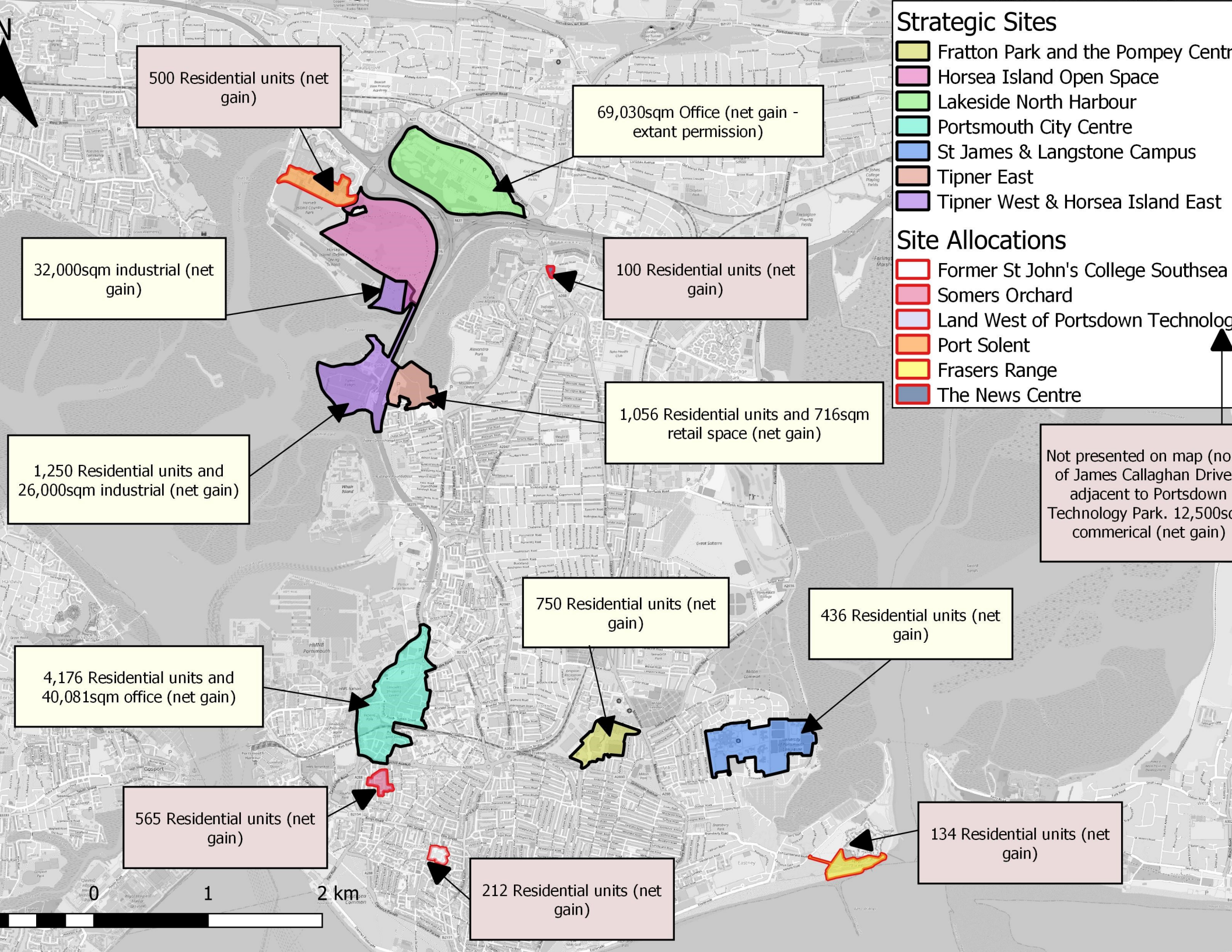
shift such as the Sustainable Transport Hub at the Tipner Park and Ride, identified in the Local Transport Plan 4 will help to drive down the reported queues and delays within the City Centre area by fewer private vehicle trips and further support the benefits gained from improved bus priority through the City Centre network.

9.4.5 High level cost estimates have been provided for a number of the mitigation schemes including relevant details on benchmarking, assumptions and exclusions.

9.5 Conclusion

9.5.1 Overall, this STA has provided a robust assessment of the forecast impact of strategic sites and site allocations proposed by PCC for their Local Plan. This STA details the impact of these developments on the local and strategic highway network across the Portsmouth area. This has been achieved through a variety of technical assessments using standard modelling approaches. The conclusions balance priorities for the junctions based on junction locations, opportunities for improvement whilst considering sustainable travel modes.

Appendix A- Local Plan Strategic Sites and Site Allocations Map


500 Residential units (net gain)
69,030sqm Office (net gain - extant permission)
32,000sqm industrial (net gain)
100 Residential units (net gain)
1,056 Residential units and 716sqm retail space (net gain)
1,250 Residential units and 26,000sqm industrial (net gain)
750 Residential units (net gain)
436 Residential units (net gain)
4,176 Residential units and 40,081sqm office (net gain)
565 Residential units (net gain)
212 Residential units (net gain)
134 Residential units (net gain)
Not presented on map (no of James Callaghan Drive adjacent to Portsdown Technology Park. 12,500sq commerical (net gain)
Strategic Sites
Fratton Park and the Pompey Centr
Horsea Island Open Space
Lakeside North Harbour
Portsmouth City Centre
St James & Langstone Campus
Tipner East
Tipner West & Horsea Island East
Site Allocations
Former St John's College Southsea
Somers Orchard
Land West of Portsdown Technolog
Port Solent
Frasers Range
The News Centre
0
1
2 km

Appendix B - Strategic Modelling Assumptions Note

PORTSMOUTH – LOCAL PLAN MODELLING UPDATE

MODELLING ASSUMPTIONS FOR SRTM

IDENTIFICATION TABLE	
Client/Project owner	Portsmouth City Council
Project	Portsmouth – Local Plan Modelling Update
Title of Document	Modelling Assumptions for SRTM
Type of Document	Technical Note
Date	19/07/2023
Reference number	GB01T23C11
Number of pages	30

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1. INTRODUCTION

1.1 Overview

1.1.1 Portsmouth City Council, 'PCC, the Council', is developing a new strategy for the city though a new Local Plan for Portsmouth. The plan will set out the planning strategy for meeting future development needs in the city for the period up to 2040. Once adopted, the Local Plan will replace policies in existing planning policy documents and form the basis for taking decisions on planning applications.

1.1.2 SYSTRA Ltd has been commissioned by the Council to provide evidence and support in the development of the Local Plan, in the form of a full plan-level Transport Assessment for Regulation 19 Consultation Stage. The key purpose of this assessment is the evaluation of the impact of proposed development sites on the surrounding transport network.

1.1.3 This follows SYSTRA's previous commission (2018-2020) of providing a draft Transport Assessment for a Local Plan period of up to 2036. The previous study was conducted in four parts, as follows;

- Part 1: A review of existing high level analysis to support assessment of strategic sites in the city and identification of key issues, constraints and opportunities
- Part 2: Analysis of the impact of development in the new Local Plan
- Part 3: An assessment of possible mitigation measures to support growth
- Part 4: On-going advice and support to the Council related to the above.

1.1.4 Since the previous study, the Council have noted several updates in relation to site allocation sizes, alongside various transport projects within the city having progressed. These updates therefore need to be reflected in an updated Transport Assessment and associated transport modelling to assess overall impacts.

1.2 Purpose of this Technical Note

1.2.1 This technical note summarises the Strategic Modelling Assumptions to be applied in the model runs using the strategic Solent Sub-Regional Transport Model (SRTM), which will provide the evidence base to inform the Regulation 19 Transport Assessment. The assumptions have been informed by the previous study and relevant discussions with the Council to agree the proposed methodology.

2. SOLENT TRANSPORT – SUB REGIONAL TRANSPORT MODEL (SRTM) BACKGROUND

2.1 Model Development

2.1.1 SYSTRA was commissioned, as part of a wider team, to support Solent Transport with the development and application of the SRTM for this nationally important area. An update to the original 2010 model was completed in early 2017 to bring the base year forward to 2015. In early 2021, a further update was completed to revalidate the model against a 2019 base year.

2.1.2 The SRTM has been developed to support a wide-ranging set of interventions across the Solent Transport sub-region, and is specifically required to be capable of:

- Forecasting changes in travel demand, road traffic, public transport patronage and active mode use over time as a result of changing economic conditions, land-use policies and development, and transport improvement and interventions (schemes);
- Testing the impacts of land-use and transport policies and strategies within a relatively short model run time; and
- Testing the impacts of individual transport interventions in the increased detail necessary for preparing submissions for inclusion in funding programmes.

2.2 Sub Regional Transport Model Context and Scope

2.2.1 The SRTM is a suite of linked models comprising the following components as shown in Figure 1:

- The Main Demand Model (MDM) which predicts when (time of day), where (destination choice) and how (choice of mode) journeys are made;
- the Gateway Demand Model (GDM) which predicts demand for travel from ports and airports;
- the Road Traffic Model (RTM) which determines the routes taken by vehicles through the road network and journey times, accounting for congestion;
- the Public Transport Model (PTM) which determines routes and services chosen by public transport passengers; and
- a Local Economic Impact Model (LEIM) which uses inputs including transport costs to forecast the quantum and location of households, populations and jobs.

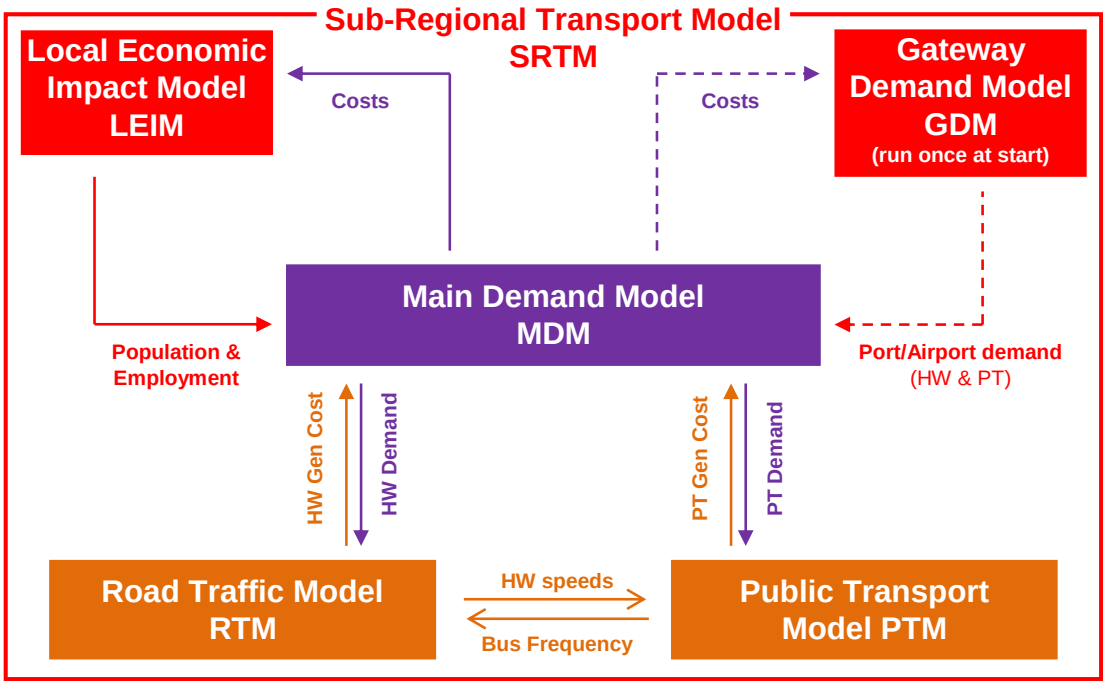


Figure 1. Solent Transport Sub-Regional Transport Model

2.2.2 The modelled area of the SRTM is divided into four regions, shown in Figure 2 which differ by zone aggregation and modelling detail. Portsmouth is within the Core Fully Modelled Area (the most detailed region of the model). The zones within the borough are shown in Figure 3.

2.2.3 In accordance with guidance three weekday periods are modelled in the SRTM:

- AM peak: 08:00 to 09:00, being the busiest hour between 07:00 and 10:00, (defined as 38.2% of the three hours for Highway and 40% for Public Transport);
- Inter peak: average of 10:00 to 16:00 (i.e. 16.7% of the six hours for both modes); and
- PM peak: 17:00 to 18:00, the busiest hour between 16:00 and 19:00, (defined as 35.8 % of the three hours for Highway and 40% for Public Transport).

2.2.4 The SRTM has a base year of 2019, and forecast years of 2026, 2031, 2036, and 2041. For this Local Plan assessment, scenarios were forecast to 2041. As the Local Plan period is up to 2040, only committed development until 2040 has been included in the model.

2.2.5 The SRTM is a strategic model and the scope of the model is extensive. As such, the analysis of specific localised traffic conditions necessitates a degree of interpretation and a common-sense approach in conjunction with a knowledge of local baseline conditions.

Figure 2. SRTM Study Area

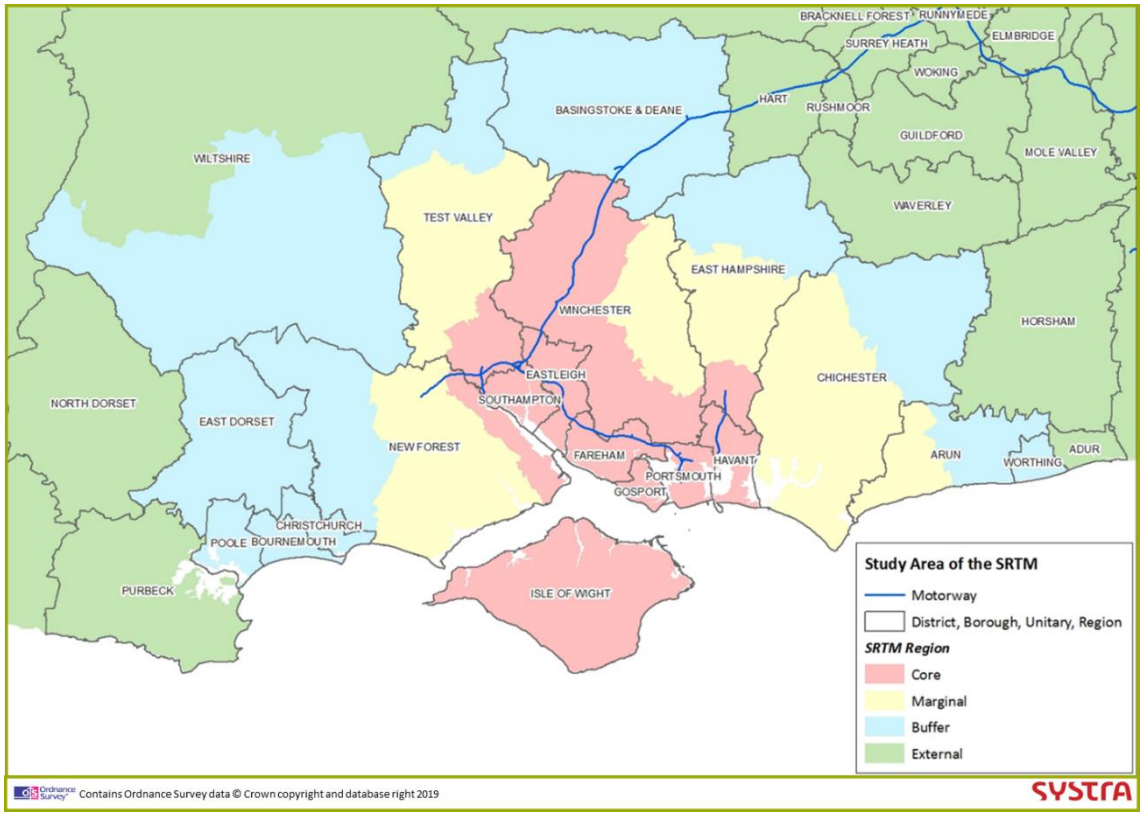
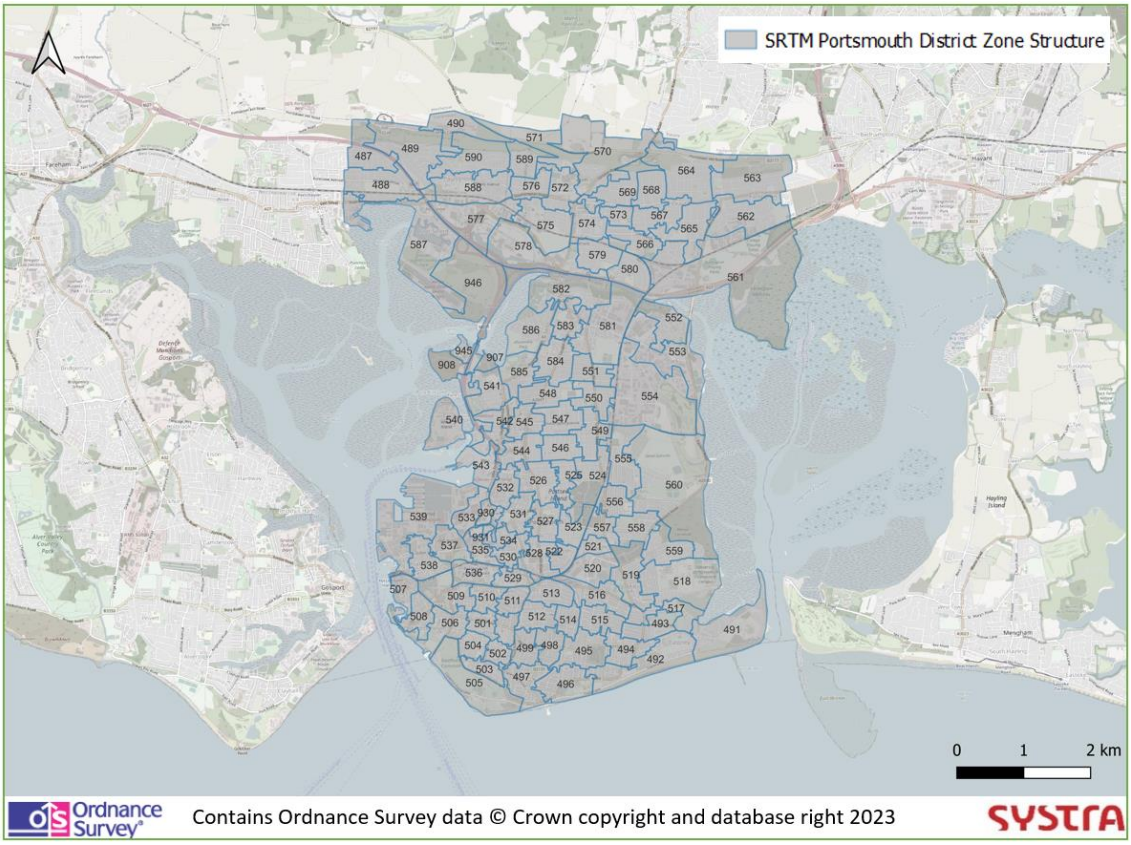


Figure 3. SRTM Portsmouth District Zone Structure



3. SRTM MODEL SCENARIOS

3.1.1 The following scenarios will be included in the Strategic Model for both the AM (07:00-10:00) and PM (16:00-19:00) network peaks. It is noted that 2041 is the closest scenario year available in the SRTM to align with the 2040 Local Plan period. For Portsmouth, only growth up to 2040 will be included.

- Scenario 1: 2019 Base - Current SRTM Base Model
- Scenario 2: 2041 Baseline - No Local Plan development within Portsmouth except for committed sites
- Scenario 3: 2041 Do Minimum - Full Local Plan development without transport mitigation
- Scenario 4: 2041 Do Something - Full Local Plan development with transport mitigation

3.1.2 **Scenario 1 – 2019 Base - Current SRTM Base Model**

3.1.3 The SRTM has a Base year of 2019 and represents infrastructure and development as at that time point. The base year model is calibrated and validated against observed data collected in 2019 to provide the basis from which the future modelled years (Scenarios 2-4) are developed.

Scenario 2 – 2041 Baseline - No Local Plan development in Portsmouth except for committed sites

3.1.4 The Baseline forms the scenario against which the proposed Local Plan development quantum scenarios will be assessed.

3.1.5 In this study, the Baseline includes all current (at time of commissioning) completed development and infrastructure within Portsmouth, in addition to all committed development and infrastructure through to 2040. In the Baseline, no allowance is made for Local Plan allocations within Portsmouth.

3.1.6 Outside of Portsmouth, development growth is assumed to continue in accordance with the adopted Local Plan's for the respective Borough's and in accordance with TEMPro v7.2 growth projections for the SRTM modelled area a whole (TEMPro v7.2 provides more robust results compared to TEMPro v8). The Fareham Local Plan was adopted in April 2023 and therefore has not yet been included in the SRTM. This will be included into the SRTM at this stage of the process.

Scenario 3 – 2041 Do Minimum *With Full Local Plan Development, Without Mitigation Measures*

3.1.7 The Do Minimum scenario builds on the Scenario 2 - 2041 Baseline, with the addition of the full quantum of proposed development associated to the Portsmouth Local Plan. HELAA site growth is also included in this scenario. Growth outside the borough is identical to the Baseline. Where specific site allocations are not supplied, remaining development will be considered windfall and distributed evenly across the zones in Portsmouth. By comparing the outputs of the Do Minimum scenario with the 2041 Baseline, the transport impacts resulting from the Portsmouth Local Plan proposals can be isolated.

Scenario 4 – 2041 Do Something *With Full Local Plan Development, With Mitigation Measures*

3.1.8 Scenario 4 will incorporate the highway mitigation measures which are to be proposed by SYSTRA in collaboration with PCC, as part of the local junction mitigation for the Local Plan, following review of the Scenario 1-3 model assessments. Scenario 4 captures the impact of these interventions in the wider context of the full Borough and surrounding areas.

3.2 Trip Rates

3.2.1 The trips rates used within SRTM are originally taken from the National Trip End Model and factored to match the South Hampshire levels of car and PT trip making in the Base Year. The rates are disaggregated by type of person, trip purpose, car availability and mode.

3.2.2 For each trip purpose (HB Work, HB Employer Business etc) the trip rates are aggregated into the three household car availability and four person types (12 categories in total). These aggregated trip rates are shown in **Appendix A**. Table 5 in **Appendix A** describes the NTEM employment categories E01 to E15.

3.2.3 The SRTM zones have been classified into 5 levels of PT accessibility (ie the cost difference between accessing car and PT from that zone). Using the same level of disaggregation (person type, purpose car availability and mode) the SRTM calculates accessibility factors and applies these to its trip rates. Further detail on the trip generation procedures in the SRTM are provided in Chapter 2 of the Model Development Report (Microsoft Word - TfSH_R2 MDM Model Development Report_2015Base_20191122.docx (solent-transport.com))

3.2.4 Because the SRTM has been developed specifically to model the South Hampshire area, SYSTRA will use the inbuilt functionality of the SRTM for determining trip generation as opposed to developing and applying trip rates specific to Portsmouth Local Plan. Utilisation of the SRTM's trip rate methodology is consistent with other applications of the SRTM in support of Local Plans including, most recently, the Fareham Local Plan that was adopted in early 2023.

3.3 DfT Circular 01/2022

3.3.1 The DfT Circular 01/2022 'Strategic Road network and the delivery of sustainable development' was published in December 2022 and sets of the policy of the Secretary of State in relation to the Strategic Road Network (SRN). When undertaking any assessment in future as part of the preparation of the Local Plan, the Council should ensure that it accords with the policy advice outlined in this document.

3.3.2 Key points in the policy include, but are not limited to:

- The policy provides a significantly greater emphasis on the principles of sustainable development. Consequently, the Council will be expected to promote development at locations that are or can be made sustainable (in accordance with the long-standing requirements of the National Planning Policy Framework (NPPF)) and where opportunities to maximise walking, wheeling, cycling, public transport and shared travel have been identified;
- The policy is also clear that plan-making and decision-taking should ensure that developments optimise the potential of sites to support local facilities and sustainable transport networks. As such, this thinking should be embedded into site selection and how to develop Local Plan policies; and

- It is the responsibility of the Council to present a robust transport evidence base in support of the Local Plan. Demand forecasting models and cumulative assessment should be undertaken which has been prepared to avoid, or significantly reduce, the need for additional infrastructure on the SRN and where development can be delivered through identified improvements to the local transport network, to include infrastructure that promotes walking, wheeling, cycling and public transport and shared travel.

3.3.3 The Local Plan strategic assessment will ensure that any mitigation measures considered in the Do Something scenario will consider a range of sustainable and active travel modes including walking, cycling, public transport and shared travel. Trip rates to represent the population mix and characteristics for each zone in the SRTM are accounted for in the model. Consequently, a robust evidence base supporting the Local Plan will be provided, where any mitigation noted has been prepared to avoid the need for significant infrastructure on the SRN, identifying improvements and balancing priorities across all modes of transport.

4. STRATEGIC DEVELOPMENT SITES

4.1 Zones

4.1.1 In SYSTRA's previous study, new zones were required at several of the strategic development sites to appropriately capture the impact of the developments on the network. Based on discussions between SYSTRA and the Council it was agreed changes to the zoning were required to reflect development of the Port Solent, Horsea Island, Tipner East and Tipner West sites. All other strategic development sites did not require changes to the zoning.

4.1.2 The key changes to the Strategic Model Zoning were as follows and are now permanently coded within the SRTM:

- Port Solent and Horsea Island: Creation of a new Zone 946 to accommodate new employment floorspace on the south of Horsea Island;
- Tipner West: Creation of a new Zone 945 to separate the existing industrial (Zone 908) and proposed residential land uses;
- Tipner East: Creation of a new Zone 944 to separate committed development within this zone from Zone 907, allowing different loading locations.

4.1.3 The resultant changes to the zoning to reflect the above strategic sites are outlined in Figure 4**,** with a more detailed view of the Tipner changes illustrated in Figure 5.

Figure 4. Port Solent, Horsea Island and Tipner Amendments

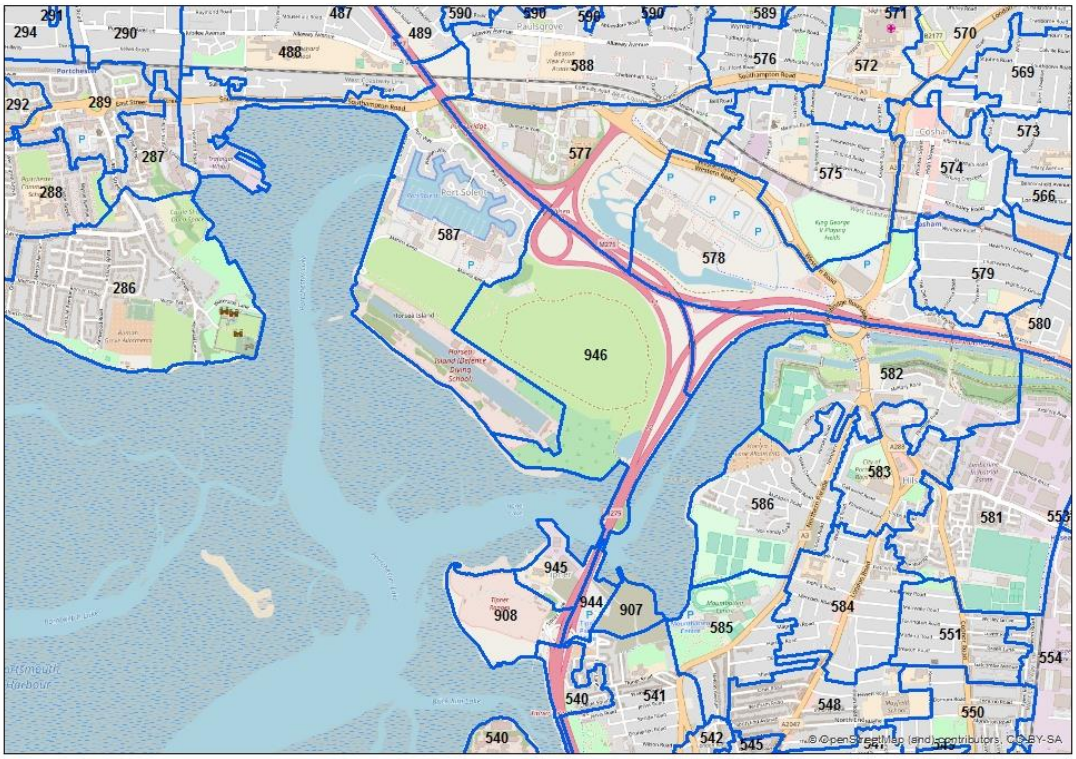
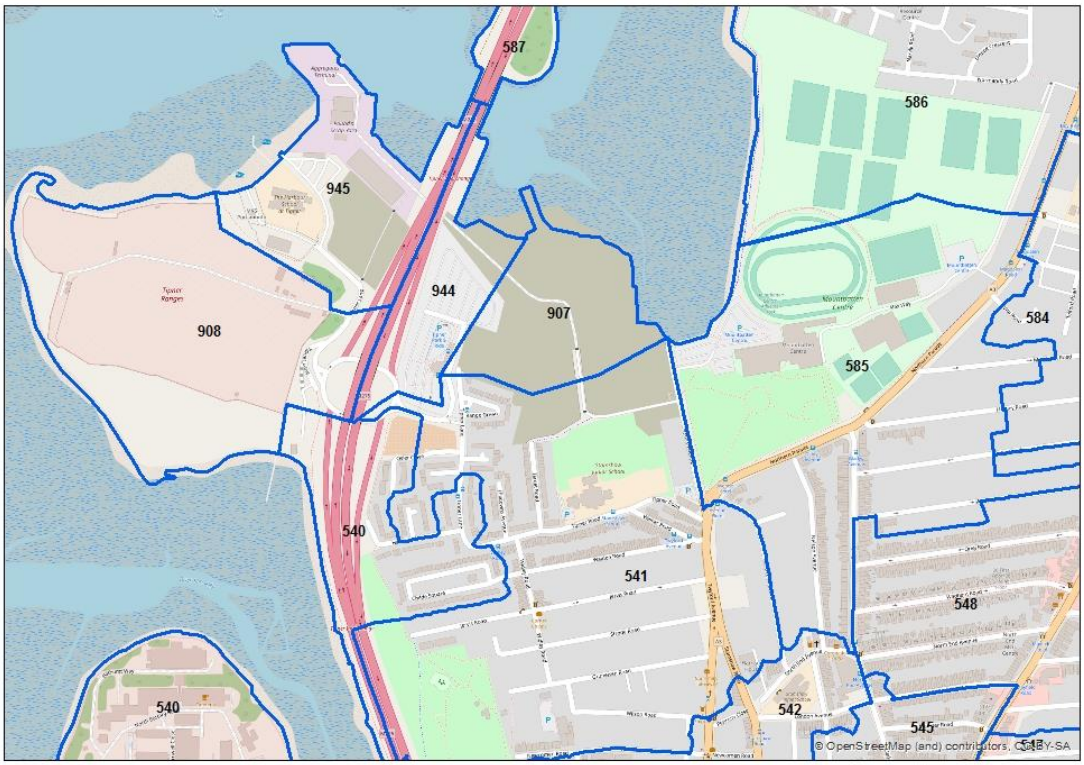


Figure 5. Tipner East and West Zone Amendments



4.1.4 The changes to the strategic model zones are reflected in all modelled scenarios, including baseline runs, to ensure consistency and allow for zone comparison between scenarios. Within the baseline scenarios those zones associated solely with strategic allocation sites do not have traffic loading from them given that the Local Plan trips are only considered in the Do Minimum scenarios.

4.2 Access

4.2.1 In SYSTRA's previous study, the proposed access arrangements for each strategic development was discussed and agreed with the Council. Similar to the zoning plans, alterations were required to reflect development of the Port Solent and Horsea Island developments, Tipner East and West, and St James and Langstone Campus. It was agreed that all other strategic development sites did not require changes to the access loading points.

4.2.2 The key changes to the Strategic Model access arrangements for the Baseline and Do Minimum scenarios were as follows and are now also permanently coded within the SRTM:

- Port Solent and Horsea Island: New access loading point providing connection to the new zone at the south of Horsea Island, connecting to Port Way;
- Tipner West: New access loading point providing connection to the M275;
- Tipner East (Zone 907): New access loading point providing connection between the new zone at Tipner East with Twyford Avenue;
- Tipner East (Zone 944): New access loading point providing access between Tipner East and the M275;
- St James and Langstone Campus: New access loading points connecting Zone 518 to Moorings Way to the north of the zone allowing both north and south loading from the zone; and
- Incorporation of the Tipner Bridge. The bridge will connect Tipner with Horsea Island, with the proposed access arrangements illustrated in Figure 9. The bridge is

proposed to only allow access for public transport and has been reflected accordingly in the model with associated vehicle type restrictions.

4.2.3 Maps showing the alterations to the access points which will be included in the Strategic Model runs for the Baseline and Do Minimum 1 scenarios are provided in Figure 6, Figure 7 and Figure 8.

Figure 6. Port Solent, Horsea Island and Tipner – Access Point Changes

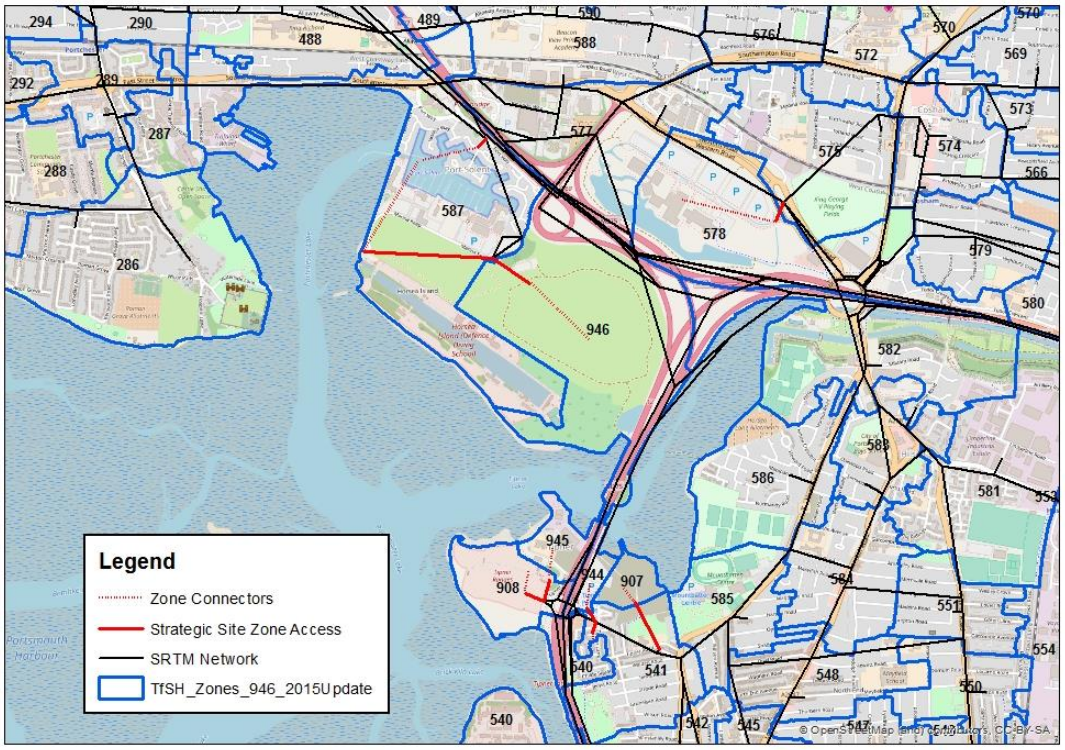
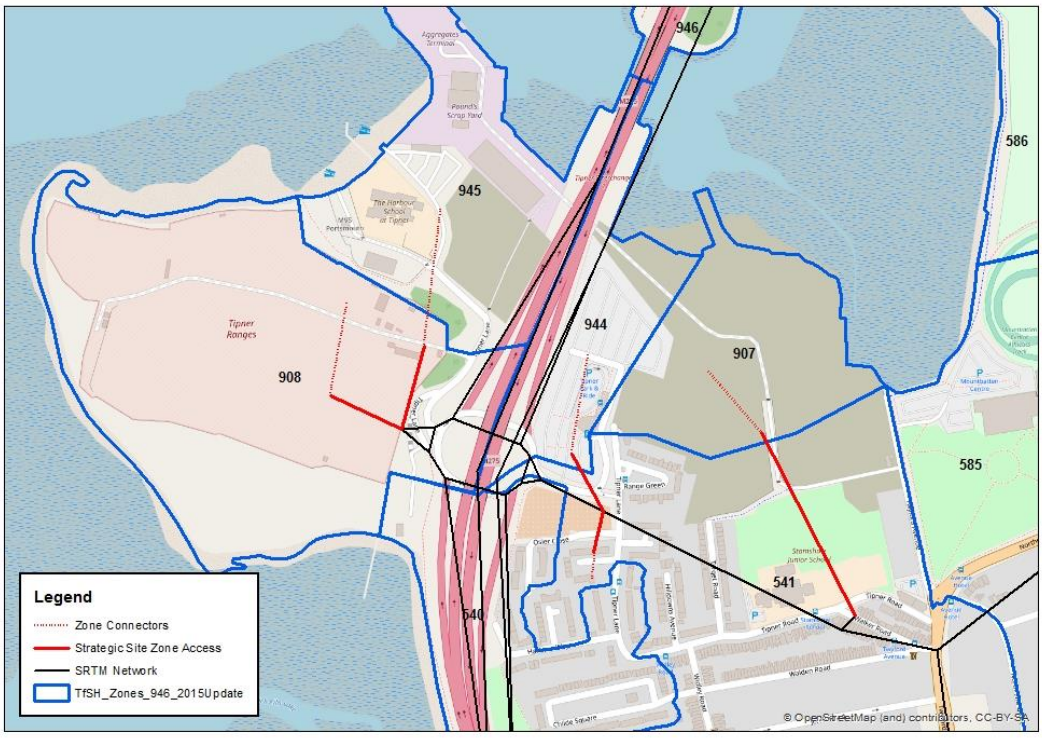


Figure 7. Tipner East and West – Access Point Changes



4.2.4 The link at the Tipner Lane/ Tipner Lane junction (from the M275) is a no through road for vehicles, preventing access to Twyford Avenue. Therefore, the vehicle link between M275

and Twyford Avenue is currently coded in the SRTM as a public transport only link, with no buses on this link. Therefore, this represents no vehicles using this link.

Figure 8. Twyford Avenue. St James and Langstone Campus – Access Point Changes

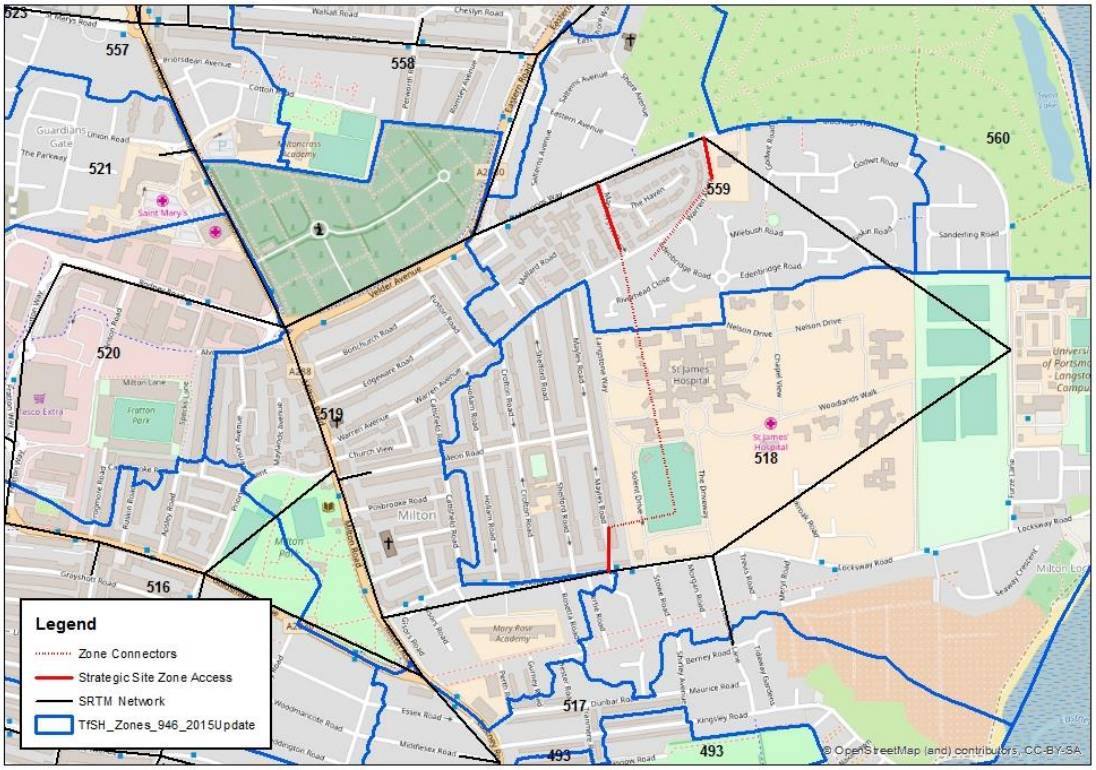
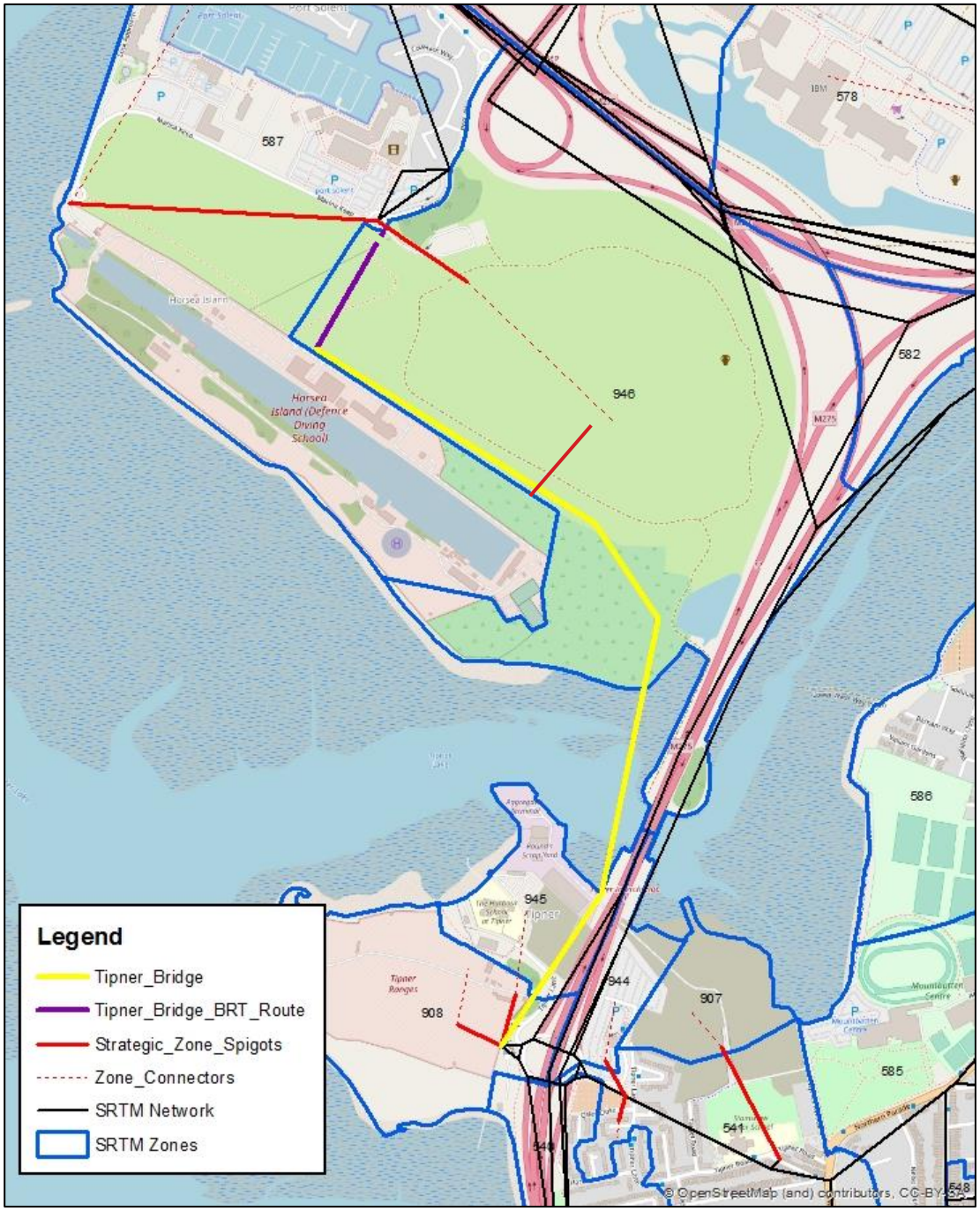


Figure 9. Port Solent, Horsea Island and Tipner – Access Point



4.2.5 It is noted that Tipner Bridge will be a public transport only route, with all other vehicle types using the M275.

4.2.6 Overall, no further changes to the SRTM zoning and access points are required as a result of the Local Plan allocations. All the key changes mentioned in this section of the note have been retained and are included in the model.

5. HIGHWAY NETWORK

5.1 Committed Schemes

5.1.1 Following consultation with the Council, a list of committed land use and highway schemes have been confirmed for inclusion in the SRTM model runs. A breakdown of the schemes which are included within the SRTM can be found in **Appendix B**. This includes schemes within Portsmouth and those in adjacent boroughs. Drawings of relevant highway schemes in Portsmouth that are included in the SRTM network can be found in **Appendix C**.

5.1.2 'Further discussions will take place with the Council regarding the committed schemes for inclusion in the Do Something scenarios prior to the SRTM model runs associated with mitigation schemes. This includes discussion on the proposed road layout associated with the City Centre North scheme, which is currently at planning application stage (Planning reference: 22/01243/CS3).

5.2 Tipner Park and Ride

5.2.1 As per the previous study, the Council has requested clarification on how the Tipner Park and Ride is currently incorporated in the SRTM model.

5.2.2 It is understood that the Park and Ride site currently has a capacity of 665 spaces and could be expanded by 2041 to 1500-2000 spaces. However, the SRTM does not model capacity of spaces and therefore the expansion will not be directly accounted for in the SRTM runs. This is not felt to have a significant detrimental impact on the validity of the results, as currently there is no capacity constraint on the Tipner Park & Ride. Any plans for expansion can be addressed at mitigation stage if necessary.

5.2.3 Should the Council require an adjustment to the modelling to consider the Park and Ride expansion, bus frequency is modelled within the SRTM and can be altered where appropriate to reflect any proposed upgrade. For reference, the current bus frequency coding is consistent with the times provided at http://parkandride.portsmouth.gov.uk/times.shtml.

6. LAND USE – NET CHANGE

6.1 Net Gains/Losses

6.1.1 PCC has provided SYSTRA with all land use changes/committed developments (completion and permission sites) for the 2041 Baseline and 2041 Do Something scenarios. This has been provided for a range of land uses (residential, retail, industrial, office, warehousing, hotel & accommodation, healthcare, leisure, C2 residential institutions and student accommodation), alongside Housing and Economic Land Availability Assessment (HELAA) residential and employment sites. Net gains/ losses for both completions and permission sites with regards to all land-uses can be found within the spreadsheet attached in **Appendix D.**

6.1.2 Whilst the land use spreadsheet does not include development outside of the city, large scale developments in Fareham, Havant and Winchester have been included in the model, as outlined in **Appendix B**, due to their potential impact on the Portsmouth network.

6.1.3 The following inclusions and assumptions have been made regarding net gains and losses associated with land uses for each scenario:

2041 Baseline

- Includes all completions and permissions (gains/losses).

2041 Do Minimum

- Includes all completions and permissions (gains/losses). Includes Local Plan site allocations, as shown in Table 1 below. Includes HELAA sites information;
- All Local Plan site allocations are assumed to be net gains as agreed with the Council – Local Plan growth is only associated with residential, retail, industrial and office land uses;
- Any HELAA and Local Plan sites which are already a permission, are not included in final HELAA or Local Plan allocation figures as this would lead to double counting- this includes Lakeside with extant permission for 69,030sqm of office space. Whilst this is treated as a permission for modelling purposes, it is noted that 50,000sqm of this is an LP allocation. However, to avoid double counting, this is only being treated as a permission.
- All HELAA sites are associated with residential and employment land uses and are assumed to be net gains as agreed with the Council; and
- Of the 40,081sqm of office space associated with the City Centre, 20,000sqm of this is office space associated with the City Centre North area, (as per planning reference: 22/01243/CS3), the remaining office space has been distributed proportionally to each zone, based on the agreed split of residential unit numbers.
- For the student accommodation land use, a discount has been applied to the total completions and permission figures (a discount of 2.5 units). This is due to student accommodation not been treated as one full residential dwelling.

Table 1. Local Plan Site Allocations – Net Gains

STRATEGIC SITE	ALLOCATION
Tipner East	• 1,056 residential units • 716sqm retail space

STRATEGIC SITE	ALLOCATION
Tipner West and Horsea Island	• 1,250 residential units • 58,000sqm industrial space
Lakeside	• 50,000sqm office space (this is treated as a permission for the purposes of modelling given the extant consent, alongside an additional 19,030sqm of extant permission).
City Centre	• 4,176 residential units • 40,081sqm office space
Fratton Park & Pompey Centre	• 750 residential units
St James & Langstone Harbour	• 436 residential units
Total	• **7,668 residential units** • **40,081sqm office space (however an additional 50,000sqm treated as a permission)** • **58,000sqm industrial space** • **716sqm retail space**

6.1.4 SYSTRA has developed a series of heat maps to demonstrate the net gains and losses in the 2041 Do Minimum scenario, including completed and committed development, HELAA sites and Local Plan allocations, in each Portsmouth zone of the strategic model. The heat maps have been presented for residential, retail, office and industrial land uses. These land uses are those with Local Plan strategic site allocations assigned to them. These maps are presented in Figure 10 to Figure 13. The heat maps use different scales in relation to the key for presentation purposes.

Figure 10. Residential Growth – 2041 Do Minimum

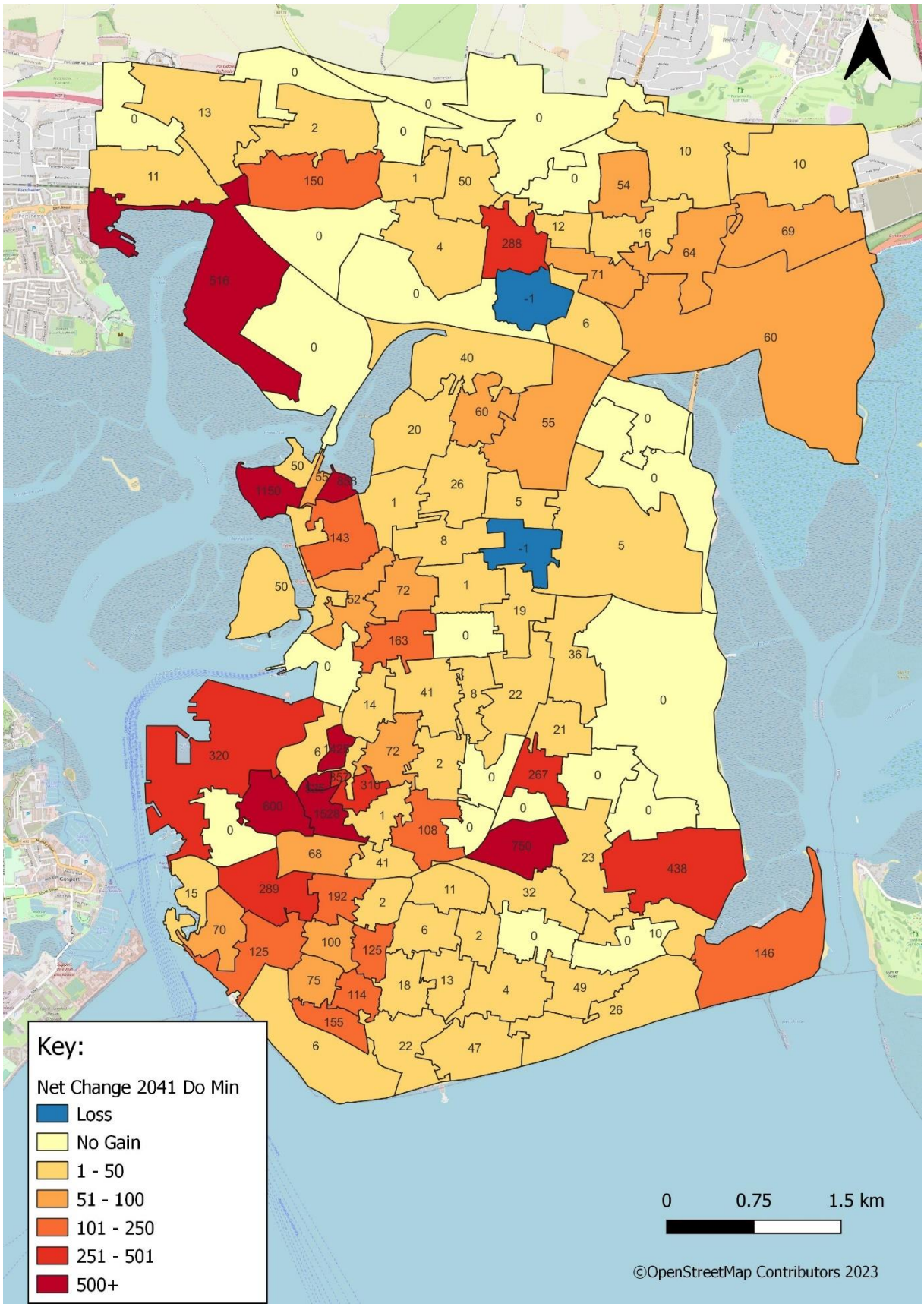


Figure 11. Industrial Growth – 2041 Do Minimum

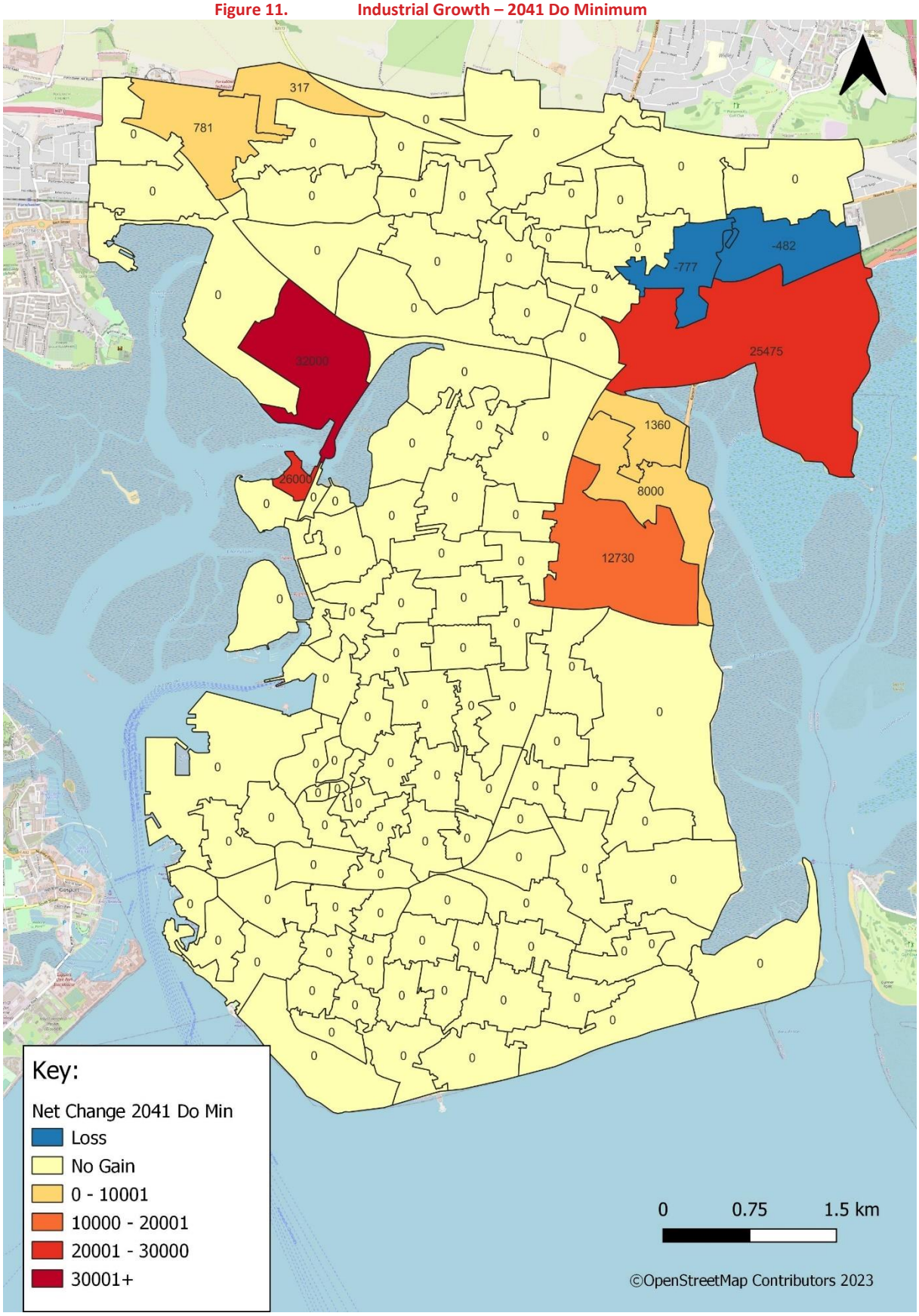


Figure 12. Office Growth – 2041 Do Minimum

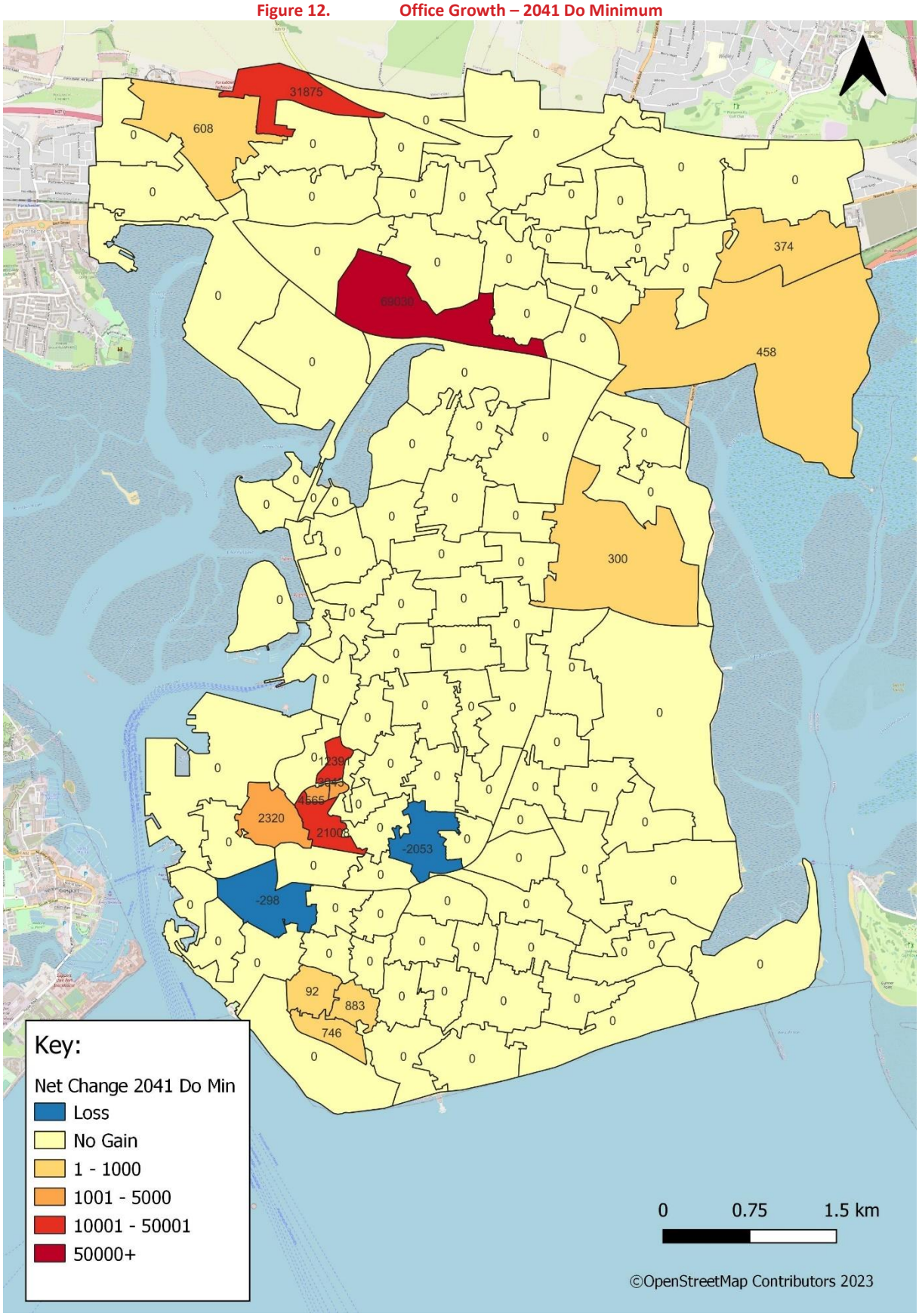
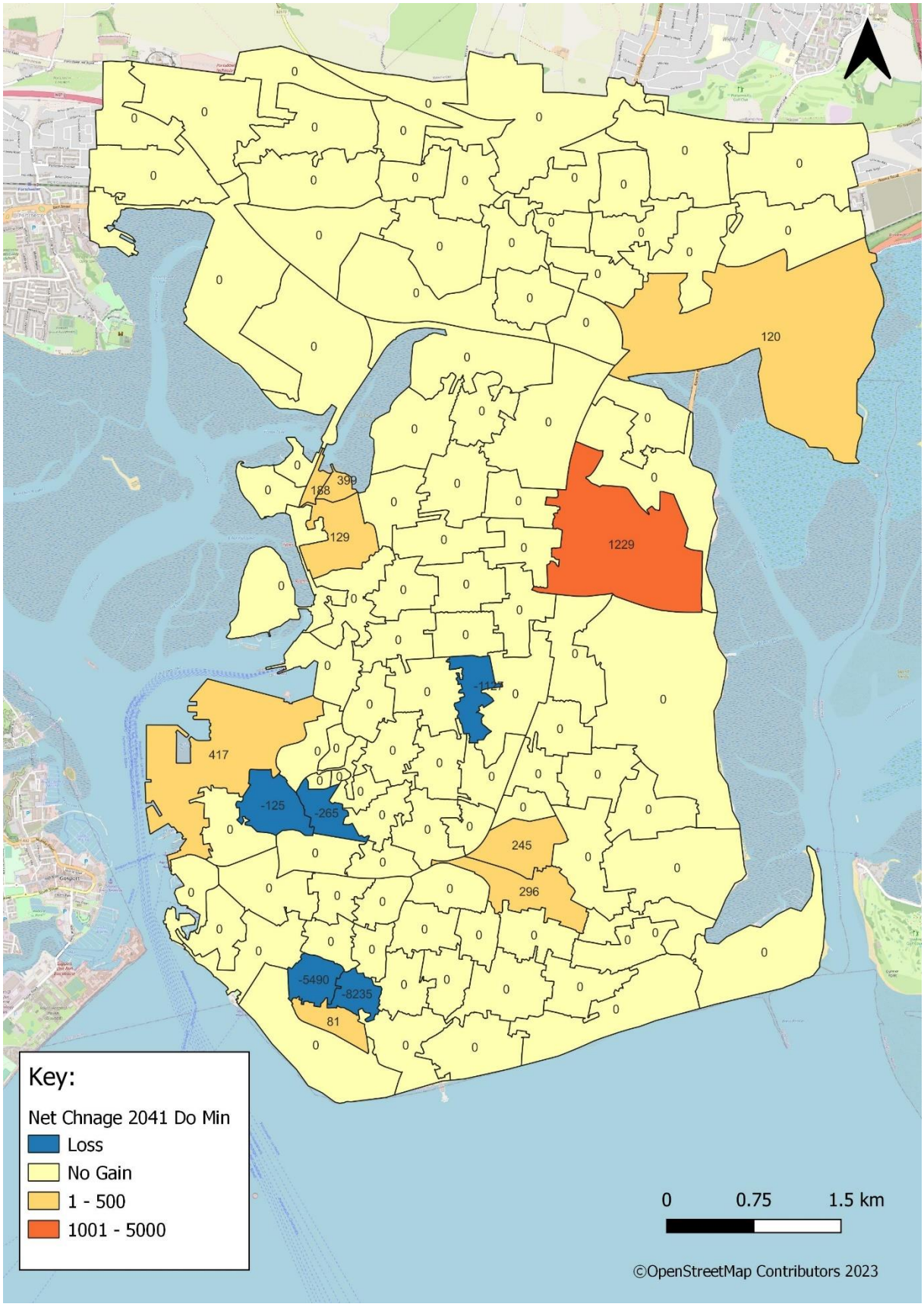


Figure 13. Retail Growth – 2041 Do Minimum



2041 Do Something

- Includes all land use and highway assumptions associated with the Do Minimum scenario. Mitigation measures will be incorporated into this scenario.

6.2 Total Growth

6.2.1 Table 2 below provides a summary of total growth across all zones associated with the 2041 Do Minimum scenario. As noted above, the Do Minimum 2041 figures include total Local Plan allocation numbers, any completion and permission gains/losses and any HELAA site gains which have been broken down in the table. A breakdown of this growth by zone is provided in **Appendix D** for each land use.

Table 2. Net Change – Total Growth/ Breakdown

LAND USE	NET CHANGE	NET CHANGE BREAKDOWN
Residential	+12,875 dwellings	. 1,465 dwellings = Completions & Permissions . 7,668 dwellings = LP Site Allocations (this excludes those already included in permissions) . 3,742 = HELAA Sites (this excludes those already included in permissions)
Retail	-12,138sqm	. -12,854sqm = Completions & Permissions . 716sqm = LP Site Allocations
Office	+145,342sqm *Any discrepancies due to rounding of the LP Site Allocation figures	. 78,582sqm = Completions & Permissions . 40,081sqm = LP Site Allocations . 26,680sqm = HELAA Sites (this excludes those already included in permissions)
Industrial	+105,404sqm	. 3,004sqm = Completions & Permissions . 58,000sqm = LP Site Allocations . 44,400sqm =HELAA Sites

LAND USE	NET CHANGE	NET CHANGE BREAKDOWN
Warehousing	+3,827sqm	. Completions & Permissions Only
Hotels & Accommodation	+11,312sqm	. Completions & Permissions Only
Healthcare	-1,356sqm	. Completions & Permissions Only
Leisure	+9,164sqm	. Completions & Permissions Only
C2 Residential Institutions	+98 dwellings	. Completions & Permissions Only
Student Accommodation	+332 dwellings (discounted value)	. Completions & Permissions Only
Primary & Secondary Education	+9,300sqm	. Completions & Permissions Only
Higher Education	+21,701qm	. Completions & Permissions Only

6.2.2 In total, approximately 319,355sqm of growth is expected in the 2041 Do Minimum scenario, across all land uses. A growth of 12,875 dwellings is expected in the 2041 Do Minimum scenario.

6.2.3 In addition to this, any windfall associated with the Local Plan for the above land uses will be modelled at 2041 Do Minimum stage, for the residential land uses. A total windfall of 790 residential units will be modelled and split equally between the model zones within Portsmouth. There is no windfall for office, industrial and retail land use.

7. SUMMARY

7.1 Conclusion

7.1.1 This technical note summarises the Strategic Modelling Assumptions to be applied in the model runs using the strategic Solent Sub-Regional Transport Model (SRTM), which will provide the evidence base to inform the Transport Assessment for Regulation 19 Consultation Stage. The assumptions have been informed by previous work undertaken by SYSTRA and relevant discussions with the Council to agree the proposed methodology.

7.1.2 The SRTM model scenarios have been agreed and highlighted, including 2019 baseline and a 2041 model year, with growth until 2040 accounted for to align with the Local Plan period. SYSTRA has developed a series of heat maps to demonstrate the net change in each zone of the strategic model for residential, industrial, office and retail land uses, the land uses associated with the Local Plan site allocations. In total, the following growth is associated with the 2041 Do Minimum scenario based on total Local Plan allocation numbers, any completion and permission gains/losses and any HELAA site gains:

Table 3. Total Growth

LAND USE	NET CHANGE
Residential	+12,875 dwellings
Retail	-12,138sqm
Industrial	+145,342sqm
Office	+105,404sqm
Warehousing	+3,827sqm
Hotels & Accommodation	+11,312sqm
Healthcare	-1,356sqm
Leisure	+9,164sqm
C2 Residential Institutions	+98 dwellings
Student Accommodation	+332 dwellings (discounted value)
Primary & Secondary Education	+9,300sqm

LAND USE	NET CHANGE
Higher Education	+21,701sqm

7.1.3 In addition to this, total windfall of 790 residential units will be modelled in the 2041 Do Minimum run, split equally between model zones within Portsmouth.

7.1.4 This technical note provides a list of land use changes and highway schemes coded into the SRTM in **Appendix B**, within Portsmouth and adjacent boroughs. This technical note provides a list of completions, permissions and allocations (gains/losses) in the 2041 Baseline and 2041 Do Minimum scenarios in **Appendix D**. Any assumptions have been outlined in this report.

7.1.5 This technical note therefore provides a record of all agreed assumptions which will inform the SRTM model runs, including an explanation for the approach taken.

Appendix A – Aggregated Trip Rates

Table 1 Person Trip Rates for Car, Public Transport and Active Modes, AM period

	Car			PT			Active Modes		
HB Work	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.003	0.008	0.007	0.002	0.000	0.000	0.010	0.003	0.006
Working Adult	0.140	0.345	0.438	0.160	0.064	0.025	0.171	0.076	0.032
Non Working Adult	0.004	0.032	0.048	0.009	0.006	0.004	0.016	0.012	0.013
Retired	0.002	0.017	0.026	0.003	0.001	0.001	0.004	0.003	0.003
HB Employ Business	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.000	0.001	0.001	0.000	0.000	0.000	0.002	0.001	0.001
Working Adult	0.008	0.021	0.044	0.004	0.002	0.002	0.002	0.003	0.002
Non Working Adult	0.001	0.002	0.004	0.000	0.000	0.000	0.000	0.000	0.001
Retired	0.001	0.002	0.004	0.000	0.000	0.000	0.000	0.000	0.001
HB Education	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.024	0.128	0.249	0.079	0.080	0.098	0.347	0.304	0.168
Working Adult	0.002	0.025	0.037	0.004	0.001	0.000	0.019	0.019	0.005
Non Working Adult	0.008	0.053	0.131	0.033	0.052	0.077	0.083	0.080	0.055
Retired	0.000	0.002	0.003	0.001	0.001	0.001	0.003	0.002	0.001
HB Other	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.011	0.052	0.094	0.011	0.004	0.002	0.049	0.035	0.022
Working Adult	0.012	0.049	0.063	0.010	0.003	0.001	0.033	0.024	0.020
Non Working Adult	0.022	0.092	0.100	0.032	0.009	0.004	0.108	0.052	0.042
Retired	0.018	0.108	0.129	0.026	0.007	0.004	0.083	0.056	0.059

Table 2 Person Trip Rates for Car, Public Transport and Active Modes, IP period

Interpeak Car	CAR			PT			Active Modes		
HB Work	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.001	0.006	0.002	0.001	0.000	0.000	0.004	0.002	0.002
Working Adult	0.023	0.068	0.081	0.023	0.008	0.002	0.055	0.029	0.011
Non Working Adult	0.002	0.025	0.029	0.005	0.005	0.002	0.009	0.011	0.008
Retired	0.001	0.011	0.013	0.002	0.001	0.000	0.002	0.002	0.002
HB Employ Business	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.000	0.000	0.001	0.000	0.000	0.000	0.002	0.000	0.001
Working Adult	0.003	0.013	0.026	0.002	0.001	0.001	0.001	0.002	0.001
Non Working Adult	0.001	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.001
Retired	0.001	0.002	0.006	0.000	0.000	0.000	0.000	0.000	0.001
HB Education	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.004	0.020	0.030	0.003	0.001	0.001	0.067	0.058	0.032
Working Adult	0.001	0.017	0.019	0.003	0.000	0.000	0.015	0.018	0.006
Non Working Adult	0.006	0.033	0.061	0.019	0.016	0.020	0.076	0.056	0.030
Retired	0.000	0.001	0.002	0.000	0.000	0.000	0.003	0.002	0.001
HB Other	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.041	0.154	0.215	0.057	0.020	0.010	0.211	0.131	0.075
Working Adult	0.042	0.165	0.190	0.051	0.012	0.004	0.140	0.063	0.037
Non Working Adult	0.092	0.354	0.406	0.156	0.040	0.020	0.379	0.188	0.132
Retired	0.077	0.390	0.482	0.130	0.032	0.018	0.300	0.173	0.148

Table 3 Person Trip Rates for Car, Public Transport and Active Modes, PM period

	Car			PT			Active Modes		
HB Work	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.000	0.009	0.005	0.000	0.000	0.000	0.002	0.003	0.003
Working Adult	0.009	0.040	0.023	0.007	0.002	0.001	0.019	0.004	0.002
Non Working Adult	0.001	0.021	0.031	0.004	0.006	0.003	0.008	0.010	0.010
Retired	0.000	0.007	0.007	0.001	0.000	0.000	0.001	0.001	0.001
HB Employ Business	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.000	0.001	0.001	0.000	0.000	0.000	0.001	0.000	0.001
Working Adult	0.001	0.004	0.008	0.001	0.000	0.000	0.000	0.001	0.000
Non Working Adult	0.000	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000
Retired	0.000	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000
HB Education	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.000	0.002	0.006	0.000	0.000	0.000	0.000	0.001	0.001
Working Adult	0.000	0.003	0.006	0.000	0.000	0.000	0.001	0.000	0.000
Non Working Adult	0.000	0.003	0.007	0.001	0.001	0.002	0.002	0.002	0.001
Retired	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HB Other	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.022	0.095	0.136	0.014	0.004	0.003	0.102	0.070	0.052
Working Adult	0.031	0.117	0.125	0.014	0.002	0.001	0.063	0.032	0.030
Non Working Adult	0.022	0.087	0.124	0.015	0.006	0.005	0.071	0.047	0.042
Retired	0.017	0.083	0.117	0.010	0.003	0.003	0.050	0.037	0.042

Table 4 Person Trip Rates for Car, Public Transport and Active Modes, Off-peak period

	Car			PT			Active Modes		
HB Work	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.004	0.024	0.014	0.003	0.001	0.001	0.016	0.008	0.011
Working Adult	0.172	0.453	0.542	0.190	0.074	0.028	0.245	0.109	0.045
Non Working Adult	0.007	0.078	0.108	0.019	0.017	0.009	0.033	0.033	0.030
Retired	0.003	0.035	0.046	0.006	0.002	0.001	0.008	0.006	0.006
HB Employ Business	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.001	0.002	0.002	0.000	0.000	0.000	0.004	0.002	0.002
Working Adult	0.012	0.038	0.078	0.006	0.003	0.003	0.004	0.005	0.003
Non Working Adult	0.001	0.004	0.011	0.000	0.000	0.001	0.000	0.001	0.002
Retired	0.002	0.005	0.012	0.000	0.000	0.001	0.000	0.001	0.002
HB Education	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.029	0.151	0.285	0.082	0.081	0.099	0.414	0.362	0.201
Working Adult	0.003	0.046	0.061	0.007	0.002	0.001	0.035	0.037	0.011
Non Working Adult	0.014	0.089	0.199	0.054	0.069	0.099	0.161	0.138	0.085
Retired	0.001	0.004	0.005	0.001	0.001	0.001	0.007	0.004	0.002
HB Other	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**	**No car available**	**Comp for car**	**No comp for car**
Child	0.074	0.301	0.445	0.082	0.028	0.014	0.362	0.236	0.149
Working Adult	0.085	0.331	0.378	0.075	0.018	0.006	0.237	0.119	0.087
Non Working Adult	0.136	0.533	0.630	0.202	0.055	0.028	0.558	0.287	0.217
Retired	0.111	0.581	0.728	0.165	0.041	0.025	0.434	0.265	0.249

Table 5 Trip Attraction Factors

SRTM Trip Purpose		HBW Work	HBB Employers business	HBE Education	HBO Shopping	HBO Personal Business	HBO Personal Business	HBO Personal Business	HBO Recreation	HBO Visiting Friends	HBO Holiday
NTEM Employment Categories	**E**	**P1**	**P2**	**P3**	**P4**	**P5a**	**P5b**	**P5c**	**P6**	**P7**	**P8**
All Jobs	**E1**	4.4431									
Households	**E2**									3.0535	
Primary and secondary schools	**E3**		0.4963	43.4826							
Higher education	**E4**		0.4963	43.4826							
Adult education	**E5**		0.4963	43.4826					30.2114		
Hotels and camp sites	**E6**		0.4963								16.3236
Retail trade	**E7**		0.4963		35.7643						
Health / Medical	**E8**		0.4963			54.2395					
Services	**E9**		0.4963					19.5396			
Industry, Construction and transport	**E10**		0.4963								
Restaurants and bars	**E11**		0.4963				0.5833		30.2114		
Recreation	**E12**		0.4963						60.4229		
Agriculture and fishing	**E13**		0.4963								3.2647
Business	**E14**		0.2482								
Holiday accommodation	**E15**										16.3236

Approval

Version	Name		Position	Date	Modifications
1	Author	Esha Shah	Consultant	31/05/2023	First Draft for Council Comments
	Checked by	Liz Hensby / Emma Jolly	Associate Director/ Principal Consultant	01/06/2023	
	Approved by	Chris Whitehead	Projects Director	01/06/2023	
2	Author	Esha Shah	Consultant	07/06/2023	V2 following client queries
	Checked by	Liz Hensby / Emma Jolly	Associate Director/ Principal Consultant	07/06/2023	
	Approved by	Chris Whitehead	Projects Director	07/06/2023	
3	Author	Esha Shah	Consultant	14/07/2023	V3 following client queries
	Checked by	Liz Hensby / Emma Jolly	Associate Director/ Principal Consultant	19/07/2023	
	Approved by	Chris Whitehead	Projects Director	19/07/2023	

Appendix C - Committed Transport and Highway Schemes in the SRTM

DISTRICT	ADDRESS	DESCRIPTION	Net Gain 2019 - 2026	Net Gain 2019- 2031	Net Gain 2019- 2036	Net Gain 2019- 2041
East Hampshire (Core)	KEYDELL NURSERY AND HAVANT ROAD HORNDEAN WATERLOOVILLE	RESIDENTIAL DEVELOPMENT - ESTIMATED 220 DWELLINGS	0	0	0	0
East Hampshire (Core)	NORTH OF JAMES COPSE ROAD HORNDEAN	RESIDENTIAL DEVELOPMENT - ESTIMATED 85 DWELLINGS	56	56	56	56
Fareham	AREAS A AND C EAST OF RALEY ROAD LOCKS HEATH SOUTHAMPTON	RESIDENTIAL DEVELOPMENT - ESTIMATED 79 DWELLINGS	20	49	49	49
Fareham	FAREHAM STATION WEST FAREHAM	RESIDENTIAL DEVELOPMENT - ESTIMATED 80 FLATS	50	80	80	80
Fareham	GENESIS CENTRE CENTRE WAY LOCKS HEATH FAREHAM	RESIDENTIAL DEVELOPMENT - ESTIMATED 35 DWELLINGS	35	35	35	35
Fareham	LAND AT HEATH ROAD LOCKS HEATH	RESIDENTIAL DEVELOPMENT - ESTIMATED 70 DWELLINGS	70	70	70	70
Fareham	WELBORNE FAREHAM	MIXED DEVELOPMENT INCLUDING AN ESTIMATED 6000 DWELLINGS	690	2170	3720	4970
Gosport	BARCLAY HOUSE GOSPORT	RESIDENTIAL DEVELOPMENT - ESTIMATED 25 DWELLINGS	25	25	25	25
Havant	BEACHLANDS HAYLING ISLAND	MIXED DEVELOPMENT - INCLUDING ESTIMATED 125 DWELLINGS	125	125	125	125
Havant	CABBAGEFIELD ROW LEIGH PARK HAVANT	RESIDENTIAL DEVELOPMENT - ESTIMATED 116 DWELLINGS	116	116	116	116
Havant	DUNSBURY WAY DUNSBURY WAY LEIGH PARK HAVANT	RESIDENTIAL DEVELOPMENT - ESTIMATED 72 DWELLINGS	0	15	15	15
Havant	HAVANT GARDEN CENTRE BARTONS ROAD HAVANT	RESIDENTIAL DEVELOPMENT - ESTIMATED 49 DWELLINGS	0	49	49	49
Havant	LEIGH PARK CENTRE LEIGH PARK CENTRE LEIGH PARK HAVANT	MIXED DEVELOPMENT - INCLUDES ESTIMATED 62 DWELLINGS	0	62	62	62
Havant	PADNELL GRANGE PADNELL ROAD COWPLAIN WATERLOOVILLE	RESIDENTIAL DEVELOPMENT - ESTIMATED 84 DWELLINGS	84	84	84	84
Havant	PORTSMOUTH WATER HEADQUARTERS HAVANT	RESIDENTIAL DEVELOPMENT - ESTIMATED 120 DWELLINGS	0	120	120	120
Havant	RIDERS LANE ALLOTMENTS RIDERS LANE HAVANT	RESIDENTIAL DEVELOPMENT - ESTIMATED 65 DWELLINGS	0	65	65	65
Havant	SSE OFFICES SITE BARTONS ROAD HAVANT	RESIDENTIAL DEVELOPMENT - ESTIMATED 90 DWELLINGS	0	80	80	80
Havant	STROUDEN COURT STOUDEN COURT LEIGH PARK HAVANT	MIXED DEVELOPMENT - INCLUDING ESTIMATED 40 DWELLINGS	40	40	40	40
Havant	WEST OF ASDA BLUE STAR SITE WATERLOOVILLE	MIXED DEVELOPMENT - INCLUDING ESTIMATED 50 DWELLINGS	50	50	50	50
Havant	WEST OF COLDHARBOUR FARM EMSWORTH HAVANT	RESIDENTIAL DEVELOPMENT - ESTIMATED 47 DWELLINGS	47	47	47	47
New Forest (Core)	ELING WHARF/ELING QUAY ELING LANE TOTTON SOUTHAMPTON	MIXED REDEVELOPMENT - ESTIMATED 400 DWELLINGS	0	0	400	400
New Forest (Core)	LAND ADJACENT TO BLACKFIELD PRIMARY SCHOOL BLACKFIELD FAWLEY	RESIDENTIAL DEVELOPMENT - ESTIMATED 30 DWELLINGS	0	30	30	30
New Forest (Core)	LAND AT CORKS FARM MARCHWOOD	RESIDENTIAL DEVELOPMENT - ESTIMATED 150 DWELLINGS	60	150	150	150
New Forest (Core)	LAND AT DURLEY FARM HOUNSDOWN, TOTTON SOUTHAMPTON	RESIDENTIAL DEVELOPMENT - ESTIMATED 80 DWELLINGS	25	80	80	80
New Forest (Core)	LAND SOUTH OF BURY ROAD MARCHWOOD	RESIDENTIAL DEVELOPMENT - ESTIMATED 700 DWELLINGS	20	300	700	700
New Forest (Core)	THE FORMER FAWLEY POWER STATIO FAWLEY	MIXED DEVELOPMENT - ESTIMATED 1380 DWELLINGS	50	630	1380	1380
New Forest (Core)	LAND ADJACENT TO FORMER FAWLEY POWER STATION FAWLEY	RESIDENTIAL DEVELOPMENT - 120 DWELLINGS	10	10	120	120
Test Valley (Core)	LAND AT HOE LANE NORTH BADDESLEY	RESIDENTIAL DEVELOPMENT - ESTIMATED 300 DWELLINGS	300	300	300	300
Test Valley (Core)	PARK FARM STONEHAM	RESIDENTIAL DEVELOPMENT - ESTIMATED 50 DWELLINGS	50	50	50	50
Test Valley (Core)	WHITENAP ROMSEY	RESIDENTIAL DEVELOPMENT - ESTIMATED 1300 DWELLINGS	200	950	1300	1300
Winchester (Core)	CATTLEMARKET SITE ANDOVER ROAD WINCHESTER	RESIDENTIAL DEVELOPMENT - ESTIMATED 150 DWELLINGS	120	150	150	150
Winchester (Core)	CLAYFIELD PARK MAIN ROAD COLDEN COMMON	RESIDENTIAL DEVELOPMENT - ESTIMATED 53 DWELLINGS	35	48	48	48
Winchester (Core)	MORGANS YARD WINCHESTER ROAD WALTHAM CHASE	RESIDENTIAL DEVELOPMENT - ESTIMATED 100 DWELLINGS	100	100	100	100
Portsmouth	PORT SOLENT BOATYARDS PORT SOLENT PORTSMOUTH	RESIDENTIAL DEVELOPMENT - ESTIMATED 500 DWELLINGS	150	500	500	500
Portsmouth	TIPNER FIRING RANGE TIPNER PORTSMOUTH	RESIDENTIAL DEVELOPMENT - ESTIMATED 600 DWELLINGS	120	370	600	600
Southampton	24-32 Canute Road and 157-159 Albert Road South	Allocated in CCAP	0	53	53	53
Southampton	AVIATION MUSEUM ALBERT ROAD SOUTH SOUTHAMPTON	RESIDENTIAL DEVELOPMENT -ESTIMATED 45 DWELLINGS	45	45	45	45
Southampton	Car Park adj 14-18 College Street	Allocated in CCAP	0	25	25	25
Southampton	Car Park, Kings Park Road	Allocated in CCAP	0	50	50	50
Southampton	Cedar Press	AP 9 (nb. awaiting decision on 113 flats) - Allocated site in CCAP	122	122	122	122
Southampton	Central Station	AP21, CCAP estimated numbers; Central Station 64	0	0	64	64
Southampton	College Street car park	Allocated in CCAP	0	80	80	80
Southampton	East of Castle Way	Allocated in CCAP	0	108	108	108
Southampton	FACTORY UNITS STANTON ROAD & MILL ROAD MILLBROOK SOUTHAMPTON	REDEVELOP WITH ESTIMATED 25 DWELLINGS	25	25	25	25
Southampton	LAND BETWEEN JESSAMINE ROAD AND WARREN AVENUE SOUTHAMPTON	REDEVELOP WITH ESTIMATED 27 DWELLINGS	27	27	27	27
Southampton	RESERVOIR SITE GLEN EYRE ROAD BASSETT SOUTHAMPTON	RESIDENTIAL DEVELOPMENT - ESTIMATED 70 DWELLINGS	0	0	70	70
Southampton	ROYAL PIER AREA TOWN QUAY SOUTHAMPTON	REDEVELOP FOR MIXED USES INCLUDING ESTIMATED 311 DWELLINGS	70	311	311	311
Southampton	Sites either side of Northern Above Bar	Allocated in CCAP	0	231	231	231
Southampton	SOUTH HANTS HOSPITAL CAR PARK ONSLOW ROAD/ST MARYS ROAD SOUTHAMPTON	REDEVELOP WITH ESTIMATED 75 DWELLINGS	0	75	75	75
Southampton	SURETY HOUSE OLD REDBRIDGE ROAD REDBRIDGE SOUTHAMPTON	REDEVELOP WITH ESTIMATED 27 DWELLINGS	27	27	27	27
Southampton	Western Gateway including City Industrial Estate (part of CCAP Quarter)	Western Gateway 100 dwellings + 60 dwll for City Industrial Estate	0	0	0	160
East Hampshire (Marginal)	HAMPSHIRE COUNTY COUNCIL DEPOT PADDOCK WAY PETERSFIELD	RESIDENTIAL DEVELOPMENT - ESTIMATED 42 DWELLINGS	15	42	42	42
East Hampshire (Marginal)	LAND AT BULMER HOUSE SITE RAMSHILL PETERSFIELD	RESIDENTIAL DEVELOPMENT - ESTIMATED 40 DWELLINGS	40	40	40	40
East Hampshire (Marginal)	LAND NORTH OF BUCKMORE FARM BELL HILL PETERSFIELD	RESIDENTIAL DEVELOPMENT - ESTIMATED 101 DWELLINGS	40	85	85	85
East Hampshire (Marginal)	LAND WEST OF THE CAUSEWAY PETERSFIELD	RESIDENTIAL DEVELOPMENT - ESTIMATED 56 DWELLINGS	20	56	56	56
New Forest (Marginal)	LAND AT BROCKHILLS LANE NEW MILTON	RESIDENTIAL DEVELOPMENT - ESTIMATED 130 DWELLINGS	130	130	130	130
New Forest (Marginal)	LAND AT HORDLE LANE HORDLE	RESIDENTIAL DEVELOPMENT - ESTIMATED 160 DWELLINGS	105	160	160	160
New Forest (Marginal)	LAND AT MILFORD ROAD LYMINGTON	RESIDENTIAL DEVELOPMENT - ESTIMATED 185 DWELLINGS	185	185	185	185
New Forest (Marginal)	LAND EAST OF EVERTON ROAD HORDLE	RESIDENTIAL DEVELOPMENT - ESTIMATED 100 DWELLINGS	100	100	100	100
New Forest (Marginal)	LAND EAST OF LOWER PENNINGTON LANE LYMINGTON	RESIDENTIAL DEVELOPMENT - ESTIMATED 100 DWELLINGS	100	100	100	100
New Forest (Marginal)	LAND NORTH OF MANOR ROAD MILFORD ON SEA	RESIDENTIAL DEVELOPMENT - ESTIMATED 110 DWELLINGS	110	110	110	110
New Forest (Marginal)	LAND SOUTH OF GORE ROAD NEW MILTON	RESIDENTIAL DEVELOPMENT - ESTIMATED 160 DWELLINGS	105	160	160	160
New Forest (Marginal)	LAND AT ASHURST HOSPITAL ASHURST	RESIDENTIAL DEVELOPMENT - ESTIMATED 30 DWELLINGS	30	30	30	30
New Forest (Marginal)	LAND AT THE FORMER LYNDHURST PARK HOTEL LYNDURST	RESIDENTIAL DEVELOPMENT - ESTIMATED 50 DWELLINGS	50	50	50	50
New Forest (Marginal)	LAND AT WHARTONS LANE ASHURST	RESIDENTIAL DEVELOPMENT - ESTIMATED 60 DWELLINGS	60	60	60	60
New Forest (Marginal)	LAND SOUTH OF CHURCH LANE SWAY	RESIDENTIAL DEVELOPMENT - 40 DWELLINGS	40	40	40	40
New Forest (Buffer)	LAND AT BURGATE FORDINGBRIDGE	RESIDENTIAL DEVELOPMENT - ESTIMATED 400 DWELLINGS	145	345	400	400
New Forest (Buffer)	LAND AT MOORTOWN LANE RINGWOOD	RESIDENTIAL DEVELOPMENT - ESTIMATED 480 DWELLINGS	105	445	480	480
New Forest (Buffer)	LAND AT SNAILS LANE RINGWOOD	RESIDENTIAL DEVELOPMENT - ESTIMATED 100 DWELLINGS	100	100	100	100
New Forest (Buffer)	LAND AT WHITSBURY ROAD FORDINGBRIDGE	RESIDENTIAL DEVELOPMENT - ESTIMATED 330 DWELLINGS	145	330	330	330
New Forest (Buffer)	LAND NORTH OF HIGHTOWN ROAD RINGWOOD	RESIDENTIAL DEVELOPMENT - ESTIMATED 270 DWELLINGS	125	270	270	270
New Forest (Buffer)	LAND NORTH OF STATION ROAD ASHFORD	RESIDENTIAL DEVELOPMENT - ESTIMATED 140 DWELLINGS	140	140	140	140
New Forest (Buffer)	LAND SOUTH OF DERRITT LANE BRANSGORE	RESIDENTIAL DEVELOPMENT - ESTIMATED 100	100	100	100	100
Test Valley (Buffer)	GEORGE YARD/ BLACK SWAN YARD EASTERN AVENUE ANDOVER	MIXED DEVELOPMENT - INCLUDING ESTIMATED 100 DWELLINGS	0	100	100	100

DISTRICT	ADDRESS	DESCRIPTION	Net Gain 2019 - 2026	Net Gain 2019- 2031	Net Gain 2019- 2036	Net Gain 2019- 2041
East Hampshire (Core)	102 DOWNHOUSE ROAD CATHERINGTON WATERLOOVILLE	RESIDENTIAL DEVELOPMENT - 29 DWELLINGS	29	29	29	29
East Hampshire (Core)	DEVELOPMENT LAND EAST OF HORND ROWLANDS CASTLE ROAD HORNDEAN WATERLOOVILLE	RESIDENTIAL ESTIMATED 954 DWELLINGS	269	669	954	954
Eastleigh	10-20 ROMSEY ROAD EASTLEIGH	REDEVELOPMENT FOR 49 DWELLINGS	49	49	49	49
Eastleigh	ABBEY FRUIT FARM GRANGE ROAD NETLEY ABBEY	RESIDENTIAL DEVELOPMENT OF 93 DWELLINGS	92	92	92	92
Eastleigh	AND ADJ LAND ST SWITHUN WELLS CHURCH ALLINGTON LANE FAIR OAK	RESIDENTIAL DEVELOPMENT FOR 72 DWELLINGS	31	31	31	31
Eastleigh	BERRY FARM HAMBLE LANE BURSLEDON	RESIDENTIAL DEVELOPMENT OF 166 DWELLINGS	27	27	27	27
Eastleigh	CHALCROFT FARM AND LAND WEST O BURNETTS LANE HORTON HEATH	OUTLINE - RESIDENTIAL DEVELOPMENT OF UP TO 950 DWELLINGS	520	950	950	950
Eastleigh	CWM, CORNER OF MORTIMERS LANE AND KNOWLE LANE FAIR OAK	REDEVELOP SITE WITH 27 DWELLINGS	27	27	27	27
Eastleigh	DRAPER TOOLS LIMITED HURSLEY ROAD CHANDLERS FORD	ERECT 130 DWELLINGS, CARE HOME AND 10 CLOSE CARE UNITS	20	140	140	140
Eastleigh	FAIR OAK LODGE ALLINGTON LANE FAIR OAK	RESIDENTIAL DEVELOPMENT FOR 49 DWELLINGS	42	42	42	42
Eastleigh	FIR TREE FARM AND VICTORIA FAR FIR TREE LANE HORTON HEATH	OUTLINE - RESIDENTIAL DEVELOPMENT OF UP TO 450 DWELLINGS	250	450	450	450
Eastleigh	LAND AT CROWS NEST LANE BOTLEY	RESIDENTIAL DEVELOPMENT OF UP TO 50 DWELLINGS	50	50	50	50
Eastleigh	LAND AT PROVIDENCE HILL BURSLEDON	RESIDENTIAL DEVELOPMENT FOR 62 DWELLINGS	50	50	50	50
Eastleigh	LAND AT ST JOHNS ROAD, FOORD ROAD AND HEDGE END	RESIDENTIAL DEVELOPMENT OF 216 DWELLINGS	106	106	106	106
Eastleigh	LAND AT TOYNBEE ROAD EASTLEIGH	RESIDENTIAL DEVELOPMENT - ESTIMATED 191 DWELLINGS	30	71	71	71
Eastleigh	LAND EAST OF KNOWLE LANE FAIR OAK	RESIDENTIAL DEVELOPMENT OF 34 DWELLINGS	29	29	29	29
Eastleigh	LAND NORTH AND EAST OF BOORLEY WINCHESTER ROAD BOTLEY	RESIDENTIAL DEVELOPMENT - 1400 DWELLINGS	615	774	774	774
Eastleigh	LAND NORTH OF CRANBURY GARDENS BURSLEDON	ERECTION OF 45 DWELLINGS	45	45	45	45
Eastleigh	LAND NORTH OF GRANGE ROAD NETLEY ABBEY	RESIDENTIAL DEVELOPMENT OF UP TO 89 DWELLINGS	89	89	89	89
Eastleigh	LAND NORTH OF MORTIMERS LANE FAIR OAK	RESIDENTIAL DEVELOPMENT OF 85 DWELLINGS	49	49	49	49
Eastleigh	LAND NORTH WEST OF BOORLEY GRE WINCHESTER ROAD BOTLEY	RESIDENTIAL DEVELOPMENT OF UP TO 680 DWELLINGS	300	680	680	680
Eastleigh	LAND OFF BOTLEY ROAD WEST END	RESIDENTIAL DEVELOPMENT FOR 100 DWELLINGS	100	100	100	100
Eastleigh	LAND SOUTH OF BURSLEDON ROAD BURSLEDON	RESIDENTIAL DEVELOPMENT OF 200 DWELLINGS	137	137	137	137
Eastleigh	LAND SOUTH OF MADDOXFORD LANE BOORLEY GREEN	OUTLINE - RESIDENTIAL DEVELOPMENT OF UP TO 50 DWELLINGS	50	50	50	50
Eastleigh	LAND WEST OF HAMMERLEY FARM BURNETTS LANE HORTON HEATH	RESIDENTIAL DEVELOPMENT OF 104 DWELLINGS	90	90	90	90
Eastleigh	LAND WEST OF WOODHOUSE LANE HEDGE END	OUTLINE - ERECTION OF 605 DWELLINGS	259	605	605	605
Eastleigh	MITCHELL HOUSE SOUTHAMPTON ROAD EASTLEIGH	PRIOR APPROVAL TO CONVERT B1A OFFICES INTO 67 FLATS	67	67	67	67
Eastleigh	PEMBERS HILL FARM MORTIMERS LANE FAIR OAK	RESIDENTIAL DEVELOPMENT FOR 242 DWELLINGS	242	242	242	242
Eastleigh	THE MOUNT HOSPITAL CHURCH ROAD BISHOPSTOKE EASTLEIGH	RETIREMENT COMMUNITY- 217 RETIREMENT & 11 PRIVATE DWELLINGS	53	53	53	53
Eastleigh	NORTH STONEHAM PARK CHESTNUT AVENUE/STONEHAM LANE EASTLEIGH	RESIDENTIAL DEVELOPMENT OF 1157 DWELLINGS	708	708	708	708
Fareham	WEST OF WICOR PRIMARY SCHO LAND NORTH OF CRANLEIGH ROAD PORCHESTER FAREHAM	RESIDENTIAL DEVELOPMENT OF 120 DWELLINGS	37	37	37	37
Fareham	BROOK LANE & SOUTH OF LAND TO THE EAST OF BROOKSIDE DRIVE WARSASH	RESIDENTIAL DEVELOPMENT FOR UP TO 85 DWELLINGS	85	85	85	85
Fareham	LAND NORTH OF FUNTLEY ROAD FAREHAM	RESIDENTIAL DEVELOPMENT FOR 27 DWELLINGS	27	27	27	27
Fareham	SWANWICK MARINA BRIDGE ROAD SWANWICK	REDEVELOP SITE FOR MIXED USES INCLUDING 50 DWELLINGS	50	50	50	50
Gosport	ANGLESEY LODGE ANGLESEY ROAD GOSPORT	RESIDENTIAL DEVELOPMENT FOR 25 ASSISTED LIVING FLATS	25	25	25	25
Gosport	DAEDALUS MANOR WAY LEE-ON-THE-SOLENT	REDEVELOP FOR RESIDENTIAL AND COMMERCIAL USES - EST 498 DWLS	193	193	193	193
Gosport	GOSPORT WATERFRONT GOSPORT WATERFRONT GOSPORT	MIXED DEVELOPMENT - INCLUDING ESTIMATED 693 DWELLINGS	310	604	645	645
Gosport	PRIDDYS HARD HERITAGE AREA GOSPORT	MIXED DEVELOPMENT - INCLUDING ESTIMATED 100 DWELLINGS	100	100	100	100
Gosport	ROWNER RENEWAL PROJECT GRANGE ROAD, HOWE ROAD & NIMRO ROWNER GOSPORT	REDEVELOP WITH UP TO 700 RESIDENTIAL UNITS & RETAIL	10	10	80	80
Gosport	ROYAL CLARENCE YARD AND ST GEORGE BARRACKS NORTH WEEVIL LANE GOSPORT	RESIDENTIAL DEVELOPMENT - 662 DWELLINGS	55	55	55	55
Gosport	ROYAL HASLAR HOSPITAL HASLAR ROAD GOSPORT	MIXED DEVELOPMENT - INCLUDING 300 RESIDENTIAL DWELLINGS	286	286	286	286
Havant	154 GOODWILLIE TIMBER YARD LONDON ROAD WATERLOOVILLE	REDEVELOP SITE WITH 96 DWELLINGS	0	96	96	96
Havant	COLT INTERNATIONAL LTD NEW LANE HAVANT	MIXED USE DEVELOPMENT INCLUDING UP TO 100 NEW HOMES	100	100	100	100
Havant	FORMER OAK PARK SCHOOL HAVANT	MIXED DEVELOPMENT - INCLUDING 99 DWELLINGS	99	99	99	99
Havant	GRAINGER DEVELOPMENT SITE LONDON ROAD WATERLOOVILLE	RESIDENTIAL DEVELOPMENT - 436 DWELLINGS	0	210	210	210
Havant	LAND AT FORTY ACRE FARM HAVANT ROAD HAVANT	RESIDENTIAL DEVELOPMENT OF 320 DWELLINGS AND A CARE HOME	230	320	320	320
Havant	LAND SOUTH OF BARTONS ROAD HAVANT	RESIDENTIAL DEVELOPMENT - 175 DWELLINGS	147	147	147	147
Havant	MEADOWLANDS SCHOOL HAVANT	RESIDENTIAL DEVELOPMENT - 43 DWELLINGS	43	43	43	43
Havant	SOUTHLEIGH PARK HOUSE EASTLEIGH ROAD HAVANT	RESIDENTIAL DEVELOPMENT - 90 DWELLINGS	90	90	90	90
Havant	WESSEX AND NETWORK RAIL NEW LANE HAVANT	MIXED DEVELOPMENT - INCLUDING 41 DWELLINGS	41	41	41	41
Havant	WEST OF SELANGOR AVENUE LAND NORTH OF HAVANT ROAD HAVANT ROAD EMSWORTH	RESIDENTIAL DEVELOPMENT FOR 147 DWELLINGS	146	146	146	146
Havant	WOODCROFT FARM WOODCROFT LANE WECOCK WATERLOOVILLE	RESIDENTIAL DEVELOPMENT - 289 DWELLINGS	252	252	252	252
New Forest (Core)	2 SOUTH STREET HYTHE	RESIDENTIAL DEVELOPMENT - 43 RETIREMENT APARTMENTS	43	43	43	43
New Forest (Core)	AREA 7 HANGER FARM AIKMAN LANE TOTTON SOUTHAMPTON	RESIDENTIAL DEVELOPMENT - 432 DWELLINGS	0	60	270	330
New Forest (Core)	LAND AT BROKENFORD LANE TOTTON SOUTHAMPTON	RESIDENTIAL DEVELOPMENT - 45 DWELLINGS	45	45	45	45
New Forest (Core)	LAND AT FOREST LODGE FARM FAWLEY ROAD HYTHE	RESIDENTIAL DEVELOPMENT - 45 DWELLINGS	45	45	45	45
New Forest (Core)	LAND NORTH OF LOPERWOOD LANE LOPERWOOD LANE CALMORE TOTTON	RESIDENTIAL DEVELOPMENT - ESTIMATED 1000 DWELLINGS	300	780	1000	1000
Test Valley (Core)	FORMER NORTH HILL SAWMILL YARD BADDESLEY ROAD FLEXFORD CHANDLERS FORD	OUTLINE - ERECT CARE VILLAGE OF UP TO 149 EXTRA CARE UNITS	149	149	149	149
Test Valley (Core)	GANGER FARM GANGER FARM LANE ROMSEY	RESIDENTIAL DEVELOPMENT - 275 DWELLINGS	108	108	108	108
Test Valley (Core)	LAND AT ABBOTSWOOD SANDY LANE ABBOTSWOOD ROMSEY	RESIDENTIAL DEVELOPMENT - 800 DWELLINGS	27	27	27	27
Test Valley (Core)	LAND AT REDBRIDGE LANE NURSLING	RESIDENTIAL DEVELOPMENT OF 330 DWELLINGS	110	110	110	110
Test Valley (Core)	LAND EAST OF ROWNHAMS LANE ROWNHAMS	RESIDENTIAL DEVELOPMENT FOR 380 DWELLINGS	380	380	380	380
Test Valley (Core)	NIGHTINGALE LODGE GREATWELL DRIVE ROMSEY	REDEVELOP SITE WITH 54 EXTRA CARE UNITS	54	54	54	54
Test Valley (Core)	ROMSEY BREWERY PRINCES ROAD ROMSEY	CONVERT MALTHOUSE TO 44 FLATS & ERECT 211 DWELLINGS	10	60	110	160
Test Valley (Core)	STANBRIDGE EARLS STANBRIDGE LANE AWBRIDGE	REDEVELOP SITE WITH 155 UNIT CARE COMMUNITY	155	155	155	155
Test Valley (Core)	WEST OF BAROONA CUPERNHAM LANE ROMSEY	RESIDENTIAL DEVELOPMENT FOR 73 DWELLINGS	73	73	73	73
Winchester (Core)	ABBEY MILL STATION ROAD BISHOPS WALTHAM SOUTHAMPTON	REDEVELOP SITE WITH 70 DWELLINGS	50	70	70	70
Winchester (Core)	ALBANY FARM WINCHESTER ROAD BISHOPS WALTHAM	RESIDENTIAL DEVELOPMENT - 135 DWELLINGS	135	135	135	135
Winchester (Core)	AREA 2 LADY BETTYS DRIVE WHITELEY FAREHAM	RESIDENTIAL DEVELOPMENT ESTIMATED 75 DWELLINGS	75	75	75	75
Winchester (Core)	AREA BETWEEN FRIARSGATE SILVER HILL BROADWAY WINCHESTER	REDEVELOP WITH MIXED USES ESTIMATED 307 DWELLINGS	70	307	307	307
Winchester (Core)	BARTON FARM ANDOVER ROAD WINCHESTER	RESIDENTIAL DEVELOPMENT - 2000 DWELLINGS	675	1250	1758	1758
Winchester (Core)	GRAINGER DEVELOPMENT SITE NEWLANDS LANE WATERLOOVILLE	RESIDENTIAL DEVELOPMENT - 2114 DWELLINGS	1050	1475	1499	1499
Winchester (Core)	KINGS SCHOOL HOUSE SARUM ROAD WINCHESTER	RESIDENTIAL DEVELOPMENT FOR 33 SHELTERED ELDERLY FLATS	33	33	33	33
Winchester (Core)	LAND AT COPPICE HILL BISHOPS WALTHAM	RESIDENTIAL DEVELOPMENT - 73 DWELLINGS	37	37	37	37
Winchester (Core)	LAND AT HILLPOUND THE LAKES SWANMORE SOUTHAMPTON	RESIDENTIAL DEVELOPMENT - ESTIMATED 140 DWELLINGS	49	49	49	49
Winchester (Core)	LAND AT MARTIN STREET BISHOPS WALTHAM	RESIDENTIAL DEVELOPMENT - 59 DWELLINGS	59	59	59	59
Winchester (Core)	LAND AT STANMORE ESTATE NORTH OF STANMORE LANE WINCHESTER	RESIDENTIAL DEVELOPMENT - 76 DWELLINGS	76	76	76	76
Winchester (Core)	LAND EAST OF SCHOOL ROAD WICKHAM	RESIDENTIAL DEVELOPMENT - 82 DWELLINGS	82	82	82	82
Winchester (Core)	LAND EAST OF VILLAGE CENTRE DENMEAD	RESIDENTIAL DEVELOPMENT - 91 DWELLINGS	82	82	82	82
Winchester (Core)	LAND EAST OF WINCHESTER ROAD WICKHAM	RESIDENTIAL DEVELOPMENT - 120 DWELLINGS	120	120	120	120
Winchester (Core)	LAND OFF HOOKPIT FARM LANE HOOKPIT FARM LANE KINGS WORTHY WINCHESTER	RESIDENTIAL DEVELOPMENT - 35 DWELLINGS	35	35	35	35
Winchester (Core)	NORTH WHITELEY WHITELEY	MIXED DEVELOPMENT - INCLUDING UP TO 3,500 DWELLINGS	1418	3018	3496	3496
Winchester (Core)	POLICE HEADQUARTERS ROMSEY ROAD WINCHESTER	REDEVELOP WITH 244 DWELLINGS	244	244	244	244
Winchester (Core)	SANDYFIELDS NURSERY MAIN ROAD COLDEN COMMON	RESIDENTIAL DEVELOPMENT - 171 DWELLINGS	113	113	113	113
Winchester (Core)	VINEYARD TANGIERS LANE BISHOPS WALTHAM	RESIDENTIAL DEVELOPMENT - 132 DWELLINGS	132	132	132	132
Winchester (Core)	WORTHY DOWN CAMP WORTHY DOWN WINCHESTER	ERECTION OF 90 MOD DWELLINGS	30	30	30	30
Portsmouth	117-127 FRATTON ROAD FRATTON PORTSMOUTH	MIXED DEVELOPMENT INCLUDING 30 DWELLINGS	30	30	30	30
Portsmouth	7-11 HIPPODROME HOUSE GUILDHALL WALK PORTSMOUTH	RESIDENTIAL DEVELOPMENT - 71 DWELLINGS	71	71	71	71
Portsmouth	ADJACENT HOMEHEIGHTS CLARENCE PARADE SOUTHSEA	ERECT 114 FLATS IN 2 BLOCKS	38	38	38	38
Portsmouth	BRUNEL HOUSE 42 THE HARD PORTSMOUTH	PRIOR APPROVAL FOR GAIN OF 153 DWELLINGS	153	153	153	153
Portsmouth	FORMER DAIRY SITE STATION ROAD PORTSMOUTH	RESIDENTIAL DEVELOPMENT - 108 DWELLINGS	108	108	108	108
Portsmouth	FORMER KINGSTON PRISON MILTON ROAD PORTSMOUTH	MIXED DEVELOPMENT INCLUDING 267 DWELLINGS	267	267	267	267
Portsmouth	MONEYFIELDS SPORTS & SOCIAL CL MONEYFIELD AVENUE PORTSMOUTH	MIXED DEVELOPMENT - INCLUDING 26 DWELLINGS	26	26	26	26
Portsmouth	NIGHTCLUB QUEENS HOTEL OSBORNE ROAD SOUTHSEA PORTSMOUTH	ERECT 30 FLATS AND CONVERT PART OF HOTEL TO 30 FLATS	60	60	60	60
Portsmouth	TIPNER URBAN PRIORITY AREA TIPNER PORTSMOUTH	RESIDENTIAL DEVELOPMENT - ESTIMATED 1276 DWELLINGS	258	828	1196	1276
Southampton	101-119 ST. MARY STREET SOUTHAMPTON	RESIDENTIAL DEVELOPMENT - 25 DWELLINGS	25	25	25	25
Southampton	11 QUEENSWAY HOUSE QUEENSWAY SOUTHAMPTON	RESIDENTIAL DEVELOPMENT FOR 25 FLATS.	25	25	25	25
Southampton	6-12 ROYAL CRESCENT ROAD SOUTHAMPTON	MIXED DEVELOPMENT TO INCLUDE 36 DWELLINGS	36	36	36	36
Southampton	86-93 EAST STREET SOUTHAMPTON	RESIDENTIAL DEVELOPMENT 132 DWELLINGS	132	132	132	132
Southampton	AND ADJOINING LAND BARGATE SHOPPING CENTRE QUEENSWAY SOUTHAMPTON	MIXED DEVELOPMENT INCLUDING 519 DWELLINGS	287	519	519	519
Southampton	BROWNHILL HOUSE RESIDENTIAL HO LOWER BROWNHILL ROAD SOUTHAMPTON	REDEVELOPMENT OF THE SITE TO PROVIDE 29 HOMES	29	29	29	29
Southampton	CENTENARY QUAY VICTORIA ROAD WOOLSTON SOUTHAMPTON	REDEVELOP SITE FOR MIXED USE INCLUDING 1628 DWELLINGS	761	761	761	761
Southampton	DUKES KEEP MARSH LANE SOUTHAMPTON	RESIDENTIAL DEVELOPMENT - 147 DWELLINGS	147	147	147	147
Southampton	FORMER OAKLANDS SCHOOL FAIRISLE ROAD SOUTHAMPTON	REDEVELOPMENT OF SITE WITH 103 DWELLINGS	103	103	103	103
Southampton	FORMER TOWN DEPOT SITE CHAPEL RIVERSIDE ALBERT ROAD NORTH SOUTHAMPTON	MIXED DEVELOPMENT INCLUDING 457 DWELLINGS	362	362	362	362
Southampton	FROBISHER HOUSE BLECHNYDEN TERRACE SOUTHAMPTON	PRIOR APPROVAL FOR 63 DWELLINGS - Updated by SCC to 114 total	114	114	114	114
Southampton	LAND AT MEGGESON AVENUE MEGGESON AVENUE TOWNHILL PARK SOUTHAMPTON	REDEVELOPMENT OF TOWNHILL PARK ESTATE WITH 665 DWELLINGS.	213	318	318	318
Southampton	Leisure World	Leisure World application - outline planning permitted 16/03/21	100	400	650	650
Southampton	NORWICH HOUSE SOUTHBROOK ROAD SOUTHAMPTON	PRIOR APPROVAL FOR 74 DWELLINGS - SCC updated to 98 total	98	98	98	98
Southampton	Olleco, Royal Crescent Road	19/00813/FUL approved - Permitted site	91	91	91	91
Southampton	ORDNANCE SURVEY ROMSEY ROAD SOUTHAMPTON	REDEVELOP FOR MIXED USES INCLUDING 641 DWELLINGS	241	241	241	241
Southampton	PAYNES ROAD AND RICHMOND WORKS 111-113 PITT ROAD SOUTHAMPTON	MIXED DEVELOPMENT - 40 DWELLINGS AND INDUSTRIAL USES	40	40	40	40
Southampton	SEAFARER CENTRE 12-14 QUEENS TERRACE SOUTHAMPTON	CONVERSION OF OFFICE INTO 27 FLATS	27	27	27	27
Southampton	SUMMERS STREET MERIDIAN SITE RADCLIFFE ROAD SOUTHAMPTON	MIXED REDEVELOPMENT - 360 DWELLINGS	264	264	264	264
Southampton	THE FIRE HOUSE VINCENTS WALK SOUTHAMPTON	MIXED DEVELOPMENT - 39 DWELLINGS & INDUSTRIAL USES	38	38	38	38
Southampton	UNITED DAIRIES STRATTON ROAD SHIRLEY SOUTHAMPTON	REDEVELOP WITH 65 DWELLINGS	49	49	49	49

DISTRICT	ADDRESS	DESCRIPTION	Net Gain 2019 - 2026	Net Gain 2019-2031	Net Gain 2019-2036	Net Gain 2019-2041
Southampton	WATERMARK WEST QUAY WESTERN ESPLANADE LANSDOWNE HILL SOUTHAMPTON	REDEVELOP FOR MIXED USES INCLUDING UP TO 260 DWELLINGS	200	260	260	260
Southampton	WOODSIDE LODGE WIMPSON LANE SOUTHAMPTON	RESIDENTIAL DEVELOPMENT FOR 98 ELDERLY FLATS	98	98	98	98
East Hampshire (Marginal)	LAND AT CAUSEWAY FARM PETERSFIELD	RESIDENTIAL DEVELOPMENT - 200 DWELLINGS	31	31	31	31
East Hampshire (Marginal)	LAND AT PENNS FIELD HEATHFIELDS ROAD PETERSFIELD	RESIDENTIAL DEVELOPMENT - 85 DWELLINGS	85	85	85	85
East Hampshire (Marginal)	LAND NORTH EAST OF ANDLERS ASH ANDLERS ASH ROAD LISS	77 RESIDENTIAL UNITS	77	77	77	77
East Hampshire (Marginal)	LAND SOUTH OF DURFORD ROAD PETERSFIELD	RESIDENTIAL DEVELOPMENT FOR 70 DWELLINGS	70	70	70	70
New Forest (Marginal)	LAND NORTH OF SCHOOL LANE MILFORD ON SEA	RESIDENTIAL DEVELOPMENT - 42 DWELLINGS	42	42	42	42
Winchester (Marginal)	LAND AT THE DEAN ALRESFORD	RESIDENTIAL DEVELOPMENT - 136 DWELLINGS	76	76	76	76
Winchester (Marginal)	LAND EAST OF SUN LANE ALRESFORD	RESIDENTIAL DEVELOPMENT - 320 DWELLINGS	160	320	320	320
East Hampshire (Buffer)	FOREST CENTRE PINE HILL ROAD BORDON	MIXED DEVELOPMENT - INCLUDING 29 DWELLINGS	29	29	29	29
East Hampshire (Buffer)	LAND AT CADNAM FARM UPPER ANSTEY LANE SHALDEN ALTON	RESIDENTIAL DEVELOPMENT FOR 275 DWELLINGS	40	40	40	40
East Hampshire (Buffer)	LAND EAST OF WILL HALL FARM BASINGSTOKE ROAD ALTON	RESIDENTIAL DEVELOPMENT FOR 180 DWELLINGS	96	96	96	96
East Hampshire (Buffer)	LORD MAYOR TRELOAR HOSPITAL CHAWTON PARK ROAD ALTON	RESIDENTIAL DEVELOPMENT - 522 DWELLINGS	521	521	521	521
East Hampshire (Buffer)	LOWSLEY FARM YEOMANS LANE LIPHOOK	RESIDENTIAL DEVELOPMENT - 330 DWELLINGS	246	246	246	246
East Hampshire (Buffer)	WHITEHILL & BORDON BORDON	MIXED DEVELOPMENT - ESTIMATED 4000 DWELLINGS	1144	1972	2545	3270
New Forest (Buffer)	LAND EAST OF WHITSBURY ROAD FORDINGBRIDGE	RESIDENTIAL DEVELOPMENT - 145 DWELLINGS	96	96	96	96
New Forest (Buffer)	LAND WEST OF CROW LANE RINGWOOD	RESIDENTIAL DEVELOPMENT - 175 DWELLINGS	25	25	25	25
Test Valley (Buffer)	ENHAM PLACE NEWBURY ROAD ENHAM ALAMEIN	REDEVELOP SITE WITH 81 RESIDENTIAL CARE UNITS	81	81	81	81
Test Valley (Buffer)	GUILBERT HOUSE GREENWICH WAY ANDOVER	PRIOR APPROVAL - CONVERT B1 OFFICES INTO 66 FLATS	66	66	66	66
Test Valley (Buffer)	LAND AT PICKET PIECE OX DROVE/WALWORTH ROAD ANDOVER	RESIDENTIAL DEVELOPMENT OF 930 DWELLINGS	150	226	226	226
Test Valley (Buffer)	LAND AT PICKET TWENTY ANDOVER	RESIDENTIAL DEVELOPMENT - 1753 DWELLINGS	337	337	337	337
Test Valley (Buffer)	LAND EAST OF ICKNIELD WAY ANDOVER	RESIDENTIAL DEVELOPMENT - 2834 DWELLINGS	715	715	715	715

							Permissions						Allocations			
							Gains				Losses		Gains			
							Raw				Raw		Raw			
District	ADDRESS		TOWN	PROPOSAL	PLANSTATUS	Sqm	Retail	B1-8	Hotel & Accomm	Leisure	B8	Leisure	Retail	B1-8	Hotel & Accomm	Leisure
Southampton City		3 BASSETT AVENUE	SOUTHAMPTON	CHANGE OF USE FROM D1 TO B1A OFFICES	PERMISSION	734	0	734	0	0	0	0	0	0	0	0
Havant		16 ASTON ROAD	WATERLOOVILLE	CHANGE OF USE FROM D2 LEISURE TO B8 WAREHOUSE	PERMISSION	650	0	650	0	0	0	0	0	0	0	0
East Hampshire (Core)	LAND EAST OF HORNDEAN	ROWLANDS CASTLE ROAD	HORNDEAN	MIXED USE DEVELOPMENT INCLUDING 1.7HA OF EMPLOYMENT LAND	PERMISSION	6800	0	6800	0	0	0	0	0	0	0	0
East Hampshire (Buffer)		35 WOOLMER WAY	BORDON	ADDITIONAL INDUSTRIAL UNIT	PERMISSION	416	0	416	0	0	0	0	0	0	0	0
Gosport		46 MARINE PARADE EAST	LEE ON THE SOLENT	REDEVELOPMENT & REPLACEMENT SAILING CLUB	PERMISSION	465	0	0	0	465	0	0	0	0	0	0
New Forest (Core)		97 COMMERCIAL ROAD	TOTTON	NEW OFFICE BUILDING	PERMISSION	462	0	462	0	0	0	0	0	0	0	0
Fareham		100 WICKHAM ROAD	FAREHAM	REPLACEMENT OFFICES WITH 7 FLATS OVER AND ERECT 6 HOUSES	PERMISSION	803	0	803	0	0	0	0	0	0	0	0
Eastleigh		123 WINCHESTER ROAD	CHANDLERS FORD	ADDITION OF SECOND FLOOR FOR OFFICE USE	PERMISSION	314	0	314	0	0	0	0	0	0	0	0
Southampton City		125 HIGH STREET	SOUTHAMPTON	CHANGE OF USE FROM A1 RETAIL TO D2 LEISURE	PERMISSION	234	0	0	0	234	0	0	0	0	0	0
Southampton City		136 ABOVE BAR STREET	SOUTHAMPTON	CHANGE OF USE TO D2 SNOOKER HALL	PERMISSION	922	0	0	0	922	0	0	0	0	0	0
Test Valley (Buffer)		282 WEYHILL ROAD	ANDOVER	B8 WAREHOUSE EXTENSION	PERMISSION	415	0	415	0	0	0	0	0	0	0	0
Eastleigh	B & Q	CHESTNUT AVENUE	CHANDLERS FORD	REMAINING PHASE OF HEADQUARTERS OFFICE/RESEARCH	PERMISSION	3591	0	3591	0	0	0	0	0	0	0	0
Eastleigh	CHALCROFT FARM & LAND W. OF	BURNETTS LANE	EASTLEIGH	MIXED USE DEVELOPMENT INCLUDING 6HA OF B1B/C, B2 & B8 USES	PERMISSION	24000	0	24000	0	0	0	0	0	0	0	0
Gosport		42948 HIGH STREET	GOSPORT	REDEVELOPMENT FOR 70 BED HOTEL	PERMISSION	70	0	0	70	0	0	0	0	0	0	0
Eastleigh		44105 ROMSEY ROAD	EASTLEIGH	REDEVELOPMENT FOR MIXED USES INCLUDING GROUND FLOOR OFFICES	PERMISSION	845	0	845	0	0	0	0	0	0	0	0
Winchester (Core)		44509 HIGH STREET	WINCHESTER	REDEVELOPMENT AND CONVERSION TO 62 BED HOTEL	PERMISSION	62	0	0	62	0	0	0	0	0	0	0
Portsmouth City	117-127	FRATTON ROAD	FRATTON	MIXED DEVELOPMENT INCLUDING A1-A4 FLOORSPACE	PERMISSION	365	365	0	0	0	0	0	0	0	0	0
Gosport	132A	HIGH STREET	GOSPORT	CHANGE OF USE FROM A1 RETAIL TO D2 SNOOKER/POOL HALL	PERMISSION	373	0	0	0	373	0	0	0	0	0	0
Southampton City	144-149	HIGH STREET & WEST STREET	SOUTHAMPTON	REDEVELOPMENT FOR STUDENT FLATS AND RETAIL UNIT (A1-5)	PERMISSION	275	275	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	16 HARTLEY PARK FARM BUSINESS	SELBORNE ROAD	ALTON	REPLACEMENT B8 WAREHOUSE/B1(C) INDUSTRIAL BUILDING	PERMISSION	736	0	736	0	0	0	0	0	0	0	0
Gosport	166 FAREHAM REACH	FAREHAM ROAD	GOSPORT	ERECTION OF BUILDING FOR MIXED EMPLOYMENT USES (B1, B2 & B8)	ALLOCATION	400	0	0	0	0	0	0	0	400	0	0
Southampton City	18-22	CUMBERLAND PLACE	SOUTHAMPTON	MIXED DEVELOPMENT INCLUDING A1/A2/D2	PERMISSION	263	263	0	0	0	0	0	0	0	0	0
Fareham	22-24	THACKARY MALL	FAREHAM	REDEVELOP AND CONVERT OFFICES/RETAIL TO C1 HOTEL USE	PERMISSION	84	0	0	84	0	0	0	0	0	0	0
Eastleigh	EAST HORTON BUSINESS PARK	KNOWLE LANE	FAIR OAK	MIXED USE DEVELOPMENT INCLUDING FOUR B1A OFFICE UNITS	PERMISSION	1248	0	1248	0	0	0	0	0	0	0	0
Eastleigh	FAIR OAK VILLAGE CENTRE	FAIR OAK RD/SUMMERLANDS RD	FAIR OAK	REDEVELOPMENT FOR RETAIL	ALLOCATION	1840	0	0	0	0	0	0	1840	0	0	0
Portsmouth City	53-55	BURRFIELDS ROAD	PORTSMOUTH	CHANGE OF USE TO A1 RETAIL AND B8 STORAGE	PERMISSION	225	225	0	0	0	0	0	0	0	0	0
East Hampshire (Marginal)	6 COOMBES FORESTRY. NEW BUILDINGS	WINCHESTER ROAD	STROUD	DETACHED OFFICE/AMENITY BUILDING	PERMISSION	247	0	247	0	0	0	0	0	0	0	0
Portsmouth City	6 ST GEORGES INDUSTRIAL ESTATE	RODNEY ROAD	SOUTHSEA	CHANGE OF USE TO B1, B2 & B8	PERMISSION	260	0	260	0	0	0	0	0	0	0	0
Havant	77 JINGLES HOTEL	HORNDEAN ROAD	EMSWORTH	TWO STOREY HOTEL EXTENSION	PERMISSION	14	0	0	14	0	0	0	0	0	0	0
East Hampshire (Buffer)	8 FOREST CENTRE	PINEHILL ROAD	BORDON	CHANGE OF USE AND EXTENSION TO FORM D2 GYM	PERMISSION	480	0	0	0	480	0	0	0	0	0	0
Southampton City	88-94	PORTSWOOD ROAD	SOUTHAMPTON	REDEVELOPMENT FOR FLATS AND CLASS A2 LETTING OFFICE	PERMISSION	395	395	0	0	0	0	0	0	0	0	0
New Forest (Marginal)	9 KINGS FARM	KINGS FARM LANE	HORDLE	CHANGE OF USE FROM BARN TO B8 STORAGE	PERMISSION	360	0	360	0	0	0	0	0	0	0	0
Eastleigh	95-101	BOURNEMOUTH ROAD	CHANDLERS FORD	PART REDEVELOPMENT & EXTENSION TO WORKSHOPS	PERMISSION	448	0	448	0	0	0	0	0	0	0	0
Test Valley (Core)	ABBOTSWOOD	CUPERNHAM LANE	ROMSEY	LOCAL CENTRE RETAIL DEVELOPMENT	PERMISSION	387	387	0	0	0	0	0	0	0	0	0
Eastleigh	FORMER ALSTOM RAILWAY LAND	CAMPBELL ROAD	EASTLEIGH	LOCAL PLAN ALLOCATION FOR B2 OR B8 USES	ALLOCATION	76000	0	0	0	0	0	0	0	76000	0	0
East Hampshire (Marginal)	ADHURST ST. MARY	LONDON ROAD	SHEET	CONVERSION FOR MIXED USES INCLUDING HOTEL	PERMISSION	69	0	0	69	0	0	0	0	0	0	0
East Hampshire (Buffer)	ALICE HOLT LODGE	GRAVEL HILL LODGE	HOLT POUND	TWO STOREY OFFICE & LABORATORY BUILDING	PERMISSION	600	0	600	0	0	0	0	0	0	0	0
Eastleigh	FORMER CIVIC OFFICES SITE	VILLENEUVE ST.GEORGES WAY	EASTLEIGH	FOUR STOREY OFFICE BLOCK	PERMISSION	6879	0	6879	0	0	0	0	0	0	0	0
Southampton City	AMERICAN WHARF	ELM STREET	SOUTHAMPTON	MIXED DEVELOPMENT INCLUDING B1 OFFICES	PERMISSION	511	0	511	0	0	0	0	0	0	0	0
Test Valley (Core)	AMPFIELD GOLF CLUB	WINCHESTER ROAD	AMPFIELD	EXTENSION TO EXISTING GOLF CLUB BUILDING	PERMISSION	434	0	0	0	434	0	0	0	0	0	0
Eastleigh	HILTINGBURY RECREATION GROUND	HILTINGBURY ROAD	CHANDLERS FORD	PARTIAL REDEVELOPMENT FOR NEW SPORTS PAVILION	PERMISSION	1145	0	0	0	1145	0	0	0	0	0	0
Test Valley (Marginal)	ANDOVER GAS AND WATER	SALISBURY ROAD	ABBOTTS ANN	REPLACEMENT B1C WORKSHOP	PERMISSION	336	0	336	0	0	0	0	0	0	0	0
Test Valley (Buffer)	ANDOVER GYM CLUB, SALTO CENTRE	CHARLTON ROAD	ANDOVER	EXTENSION TO PROVIDE NEW GYMNASTICS HALL	PERMISSION	295	0	0	0	295	0	0	0	0	0	0
Eastleigh	LAND AT	CHICKENHALL LANE	EASTLEIGH	OPEN STORAGE WITH ANCILLARY OFFICES, STORAGE & VEHICLE WASH	PERMISSION	1736	0	1736	0	0	0	0	0	0	0	0
Eastleigh	LAND AT	CHICKENHALL LANE	EASTLEIGH	ALLOCATION FOR INDUSTRIAL USE	ALLOCATION	16000	0	0	0	0	0	0	0	16000	0	0
New Forest (Marginal)	B & W NURSERY	SALISBURY ROAD	PLAITFORD	CHANGE OF USE OF HORTICULTURAL BUILDINGS TO INDUSTRIAL	PERMISSION	575	0	575	0	0	0	0	0	0	0	0
Eastleigh	NORTH AND EAST OF BOORLEY GREEN	WINCHESTER ROAD	BOTLEY	COMMERCIAL DEVELOPMENT UP TO 4,355M2	PERMISSION	4355	0	4355	0	0	0	0	0	0	0	0
Southampton City	BARGATE SHOPPING CENTRE AND AD	QUEENSWAY	SOUTHAMPTON	152 FLATS, RETAIL, RESTAURANTS AND STUDENT ACCOMMODATION	PERMISSION	941	941	0	0	0	0	0	0	0	0	0
Winchester (Core)	BARN AT	MERDON CASTLE LANE	HURSLEY	CHANGE OF USE FROM AGRICULTURAL TO B8	PERMISSION	281	0	281	0	0	0	0	0	0	0	0
Eastleigh	NORTH STONEHAM PARK	CHESTNUT AVENUE/STONEHAM LANE	EASTLEIGH	MAJOR DEVELOPMENT TO INCLUDING B1A FLOORSPACE	PERMISSION	3160	0	3160	0	0	0	0	0	0	0	0
Test Valley (Marginal)	BEAR AND RAGGED STAFF	ROMSEY ROAD	STONYMARSH	14 BEDROOM ACCOMMODATION BLOCK	PERMISSION	14	0	0	14	0	0	0	0	0	0	0
Test Valley (Core)	BELBINS BUSINESS PARK	CUPERNHAM LANE	ROMSEY	ERECTION OF A 2-STOREY B1 OFFICE BUILDING	PERMISSION	261	0	261	0	0	0	0	0	0	0	0
Eastleigh	NORTH STONEHAM PARK	CHESTNUT AVENUE/STONEHAM LANE	EASTLEIGH	MIXED DEVELOPMENT INCLUDING RETAIL	PERMISSION	1700	1700	0	0	0	0	0	0	0	0	0
Eastleigh	NORTH STONEHAM PARK	CHESTNUT AVENUE/STONEHAM LANE	EASTLEIGH	MIXED DEVELOPMENT INCLUDING LEISURE	PERMISSION	1750	0	0	0	1750	0	0	0	0	0	0
Eastleigh	NORTHERN BUSINESS PARK	EASTLEIGH AIRPORT	EASTLEIGH	BUSINESS PARK.	ALLOCATION	78000	0	0	0	0	0	0	0	78000	0	0
Eastleigh	RAILTRACK LAND	EASTLEIGH AIRPORT	EASTLEIGH	BUSINESS PARK	ALLOCATION	34000	0	0	0	0	0	0	0	34000	0	0
Winchester (Core)	BISHOPS HILL HOUSE	GRAVEL HILL	SWANMORE	DEMOLITION OF EXISTING AND ERECTION OF REPLACEMENT OFFICE	PERMISSION	316	0	316	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	BLACKNEST WORKS	BLACKNEST ROAD	BLACKNEST	INDUSTRIAL/WAREHOUSE UNITS & EXTENSIONS	PERMISSION	339	0	339	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	BROAD VIEW FARM	BLACKNEST ROAD	BINSTED	NEW BARN TO BE USED AS CAFE, SHOP AND ACCOMMODATION	PERMISSION	627	0	0	0	627	0	0	0	0	0	0
Fareham	32-34 FAREHAM INDUSTRIAL PARK	STANDARD WAY	FAREHAM	CHANGE OF USE FROM D2 LEISURE TO B1/B2/B8	PERMISSION	1538	0	1538	0	0	0	0	0	0	0	0
Portsmouth City	BRUNEL HOUSE, 42	THE HARD	PORTSMOUTH	CHANGE OF USE FROM GROUND FLOOR TO A1 RETAIL AND D2 GYM	PERMISSION	417	417	0	0	0	0	0	0	0	0	0
Winchester (Core)	BTA CAR SALES, REDHILL SERVICE	WINCHESTER ROAD	WICKHAM	REPLACEMENT VEHICLE WORKSHOPS	PERMISSION	219	0	219	0	0	0	0	0	0	0	0
Fareham	AREA 12, PHASE 2, SOLENT BUSINESS PARK	ROOKERY AVENUE	WHITELEY	BUSINESS PARK DEVELOPMENT. VACANT LAND	ALLOCATION	23526	0	0	0	0	0	0	0	23526	0	0
Fareham	DAEDALUS, HANGERS EAST	CHARK LANE	STUBBINGTON	DEVELOPMENT FOR B1/B2/B8/AEROSPACE USE	PERMISSION	13900	0	13900	0	0	0	0	0	0	0	0

East Hampshire (Marginal)	CAR PARK AT	ST. PETERS ROAD	PETERSFIELD	MIXED DEVELOPMENT INCLUDING A1-A2 RETAIL	PERMISSION	328	328	0	0	0	0	0	0	0	0	0	0	0	0
Fareham	DAEDALUS, HANGERS WEST	CHARK LANE	LEE ON SOLENT	DEVELOPMENT FOR B1/B2/B8/AEROSPACE USE	PERMISSION	21912	0	21912	0	0	0	0	0	0	0	0	0	0	0
Fareham	LAND ADJACENT TO RAYMARINE	CARTWRIGHT DRIVE	FAREHAM	LIGHT INDUSTRIAL/WAREHOUSE UNIT (B1C/B2/B8 USES)	ALLOCATION	4509	0	0	0	0	0	0	0	0	4509	0	0	0	0
Southampton City	CENTENARY QUAY	JOHN THORNEYCROFT ROAD	SOUTHAMPTON	REDEVELOPMENT FOR MIXED USES INCLUDING HOTEL	PERMISSION	100	0	0	100	0	0	0	0	0	0	0	0	0	0
Fareham	LAND ADJACENT TO SHOGUN HOUSE	NEWGATE LANE	FAREHAM	VACANT INDUSTRIAL LAND	LAPSED	1480	0	0	0	0	0	0	0	0	0	0	0	0	0
Fareham	LAND AT LITTLE PARK FARM	LITTLE PARK FARM ROAD	PARK GATE	LOCAL PLAN ALLOCATION FOR INDUSTRY	ALLOCATION	22400	0	0	0	0	0	0	0	0	22400	0	0	0	0
Fareham	LIDL AND 10-23 APEX CENTRE	SPEEDFIELDS PARK	FAREHAM	REDEVELOPMENT FOR REPLACEMENT RETAIL STORE	PERMISSION	2294	2294	0	0	0	0	0	0	0	0	0	0	0	0
Fareham	SWANWICK MARINA	BRIDGE ROAD	FAREHAM	REDEVELOPMENT OF MARINA INCLUDING RETAIL	PERMISSION	1200	1200	0	0	0	0	0	0	0	0	0	0	0	0
Eastleigh	CLEANSING SERVICES GROUP	GRANGE ROAD	HEDGE END	REDEVELOPMENT FOR B2 USE	PERMISSION	690	0	690	0	0	0	0	0	0	0	0	0	0	0
Fareham	WELBORNE	A.32	FAREHAM	ALLOCATION FOR MIXED USES INCLUDING EMPLOYMENT	ALLOCATION	105000	0	0	0	0	0	0	0	0	######	0	0	0	0
Test Valley (Marginal)	COTTONWORTH FARM	FULLERTON ROAD	COTTONWORTH	CHANGE OF USE TO WINERY	PERMISSION	465	0	465	0	0	0	0	0	0	0	0	0	0	0
Fareham	WELBORNE	A.32	FAREHAM	ALLOCATION FOR MIXED USES INCLUDING A1 RETAIL	ALLOCATION	6100	0	0	0	0	0	0	0	0	6100	0	0	0	0
Winchester (Core)	CRANBURYS	THOMPSONS LANE	OWSLEBURY	REDEVELOPMENT FOR WAREHOUSE AND ANCILLARY OFFICE	PERMISSION	667	0	667	0	0	0	0	0	0	0	0	0	0	0
Southampton City	CROSSHOUSE HARD	CROSSHOUSE ROAD	SOUTHAMPTON	INDUSTRIAL ALLOCATION (WINPLAN).IN USE AS BOAT CLUB	ALLOCATION	400	0	0	0	0	0	0	0	0	400	0	0	0	0
Test Valley (Core)	CUPERNHAM HOUSE	CUPERNHAM LANE	ROMSEY	WAREHOUSE EXTENSION	PERMISSION	438	0	438	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Marginal)	CURLEWS FARM	COOKS LANE	LOCKERLEY	CHANGE OF USE TO B1 OFFICE USE	PERMISSION	316	0	316	0	0	0	0	0	0	0	0	0	0	0
Gosport	DAEDALUS		LEE-ON -SOLENT	MIXED USE DEVELOPMENT INCLUDING A1/A2/A3 RETAIL	ALLOCATION	1075	0	0	0	0	0	0	0	0	1075	0	0	0	0
Gosport	DAEDALUS		LEE-ON-SOLENT	MIXED USE DEVELOPMENT INCLUDING LEISURE USES	PERMISSION	2321	0	0	0	2321	0	0	0	0	0	0	0	0	0
Gosport	FORMER HMS DAEDALUS SITE	BROOM WAY	LEE-ON-SOLENT	REDEVELOPMENT AND RE-USE FOR B1/B2/B8	PERMISSION S	66053	0	0	0	0	0	0	0	0	0	0	0	0	0
Gosport	GOSPORT TOWN CENTRE	MUMBY ROAD/HIGH STREET/SOUTH S	GOSPORT	ALLOCATION FOR RENEWAL OF TOWN CENTRE OFFICE FLOORSPACE	ALLOCATION	7000	0	0	0	0	0	0	0	0	7000	0	0	0	0
Gosport	HASLAR HOSPITAL	HASLAR ROAD	GOSPORT	REDEVELOPMENT/CONVERSION INCLUDING B1A SMALL BUSINESS UNITS	PERMISSION	2758	0	2758	0	0	0	0	0	0	0	0	0	0	0
Gosport	HASLAR HOSPITAL	HASLAR ROAD	GOSPORT	MIXED USE DEVELOPMENT INCLUDING A3 RESTAURANT	PERMISSION	1324	1324	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Marginal)	DUNWOOD CHIPPING DEPOT	SALISBURY ROAD	SHERFIELD ENGLISH	ERECTION OF A WORKSHOP FOR B8 AND B2 USES	PERMISSION	475	0	475	0	0	0	0	0	0	0	0	0	0	0
Gosport	HUHTAMAKI (UK) LTD	ROWNER ROAD	GOSPORT	REDEVELOPMENT OF OFFICES AND WAREHOUSE WITH MIXED B USES	PERMISSION	11660	0	11660	0	0	0	0	0	0	0	0	0	0	0
Gosport	LAND AT	AERODROME ROAD	GOSPORT	ALLOCATION FOR INDUSTRIAL USE	ALLOCATION	1280	0	0	0	0	0	0	0	0	1280	0	0	0	0
Test Valley (Marginal)	EASTOVER FARM	SALISBURY ROAD	ABBOTTS ANN	REPLACEMENT AND CONVERSION OF BARNS FOR B1/B8 USES	PERMISSION	132	0	132	0	0	0	0	0	0	0	0	0	0	0
Gosport	LAND AT ROWNER ROAD &	GRANGE ROAD	GOSPORT	ALLOCATION FOR INDUSTRIAL USE	ALLOCATION	9600	0	0	0	0	0	0	0	0	9600	0	0	0	0
New Forest (Marginal)	EVERTON GARAGE LTD, 5	OLD CHRISTCHURCH ROAD	EVERTON	EXTENSION TO WORKSHOP; DEMOLITION OF EXISTING FLATS	PERMISSION	209	0	209	0	0	0	0	0	0	0	0	0	0	0
Winchester (Marginal)	EXTON PARK	ALLENS FARM LANE	EXTON	TWO STOREY OFFICE EXTENSION	PERMISSION	627	0	627	0	0	0	0	0	0	0	0	0	0	0
Gosport	PRIDDYS HARD	HERITAGE WAY	GOSPORT	ALLOCATION FOR MIXED DEVELOPMENT INCLUDING OFFICES	ALLOCATION	4960	0	0	0	0	0	0	0	0	4960	0	0	0	0
Gosport	PRIDDYS HARD HERITAGE AREA	HERITAGE WAY	GOSPORT	MIXED USE DEVELOPMENT INCLUDING A3 RETAIL	ALLOCATION	1240	0	0	0	0	0	0	0	0	1240	0	0	0	0
Gosport	WATERFRONT	MUMBY ROAD	GOSPORT	ALLOCATION FOR MIXED DEVELOPMENT INCLUDING OFFICES	ALLOCATION	20869	0	0	0	0	0	0	0	0	20869	0	0	0	0
East Hampshire (Buffer)	FOREST CENTRE	PINEHILL ROAD	BORDON	RECONFIGURATION OF RETAIL CENTRE & TWO ADDITIONAL UNITS	PERMISSION	349	349	0	0	0	0	0	0	0	0	0	0	0	0
Gosport	WATERFRONT & BUS STATION	MUMBY ROAD	GOSPORT	ALLOCATION FOR MIXED USE REDEVELOPMENT INCLUDING RETAIL	ALLOCATION	5350	0	0	0	0	0	0	0	0	5350	0	0	0	0
Havant	BAE SYSTEMS	ELETTRA AVENUE	WATERLOOVILLE	REDEVELOPMENT OF SITE FOR B1/B2/B8 INDUSTRY AND A3/A4 RETAIL	PERMISSION	8587	0	8587	0	0	0	0	0	0	0	0	0	0	0
Havant	BROCKHAMPTON WEST	HARTS FARM WAY	HAVANT	LOCAL PLAN ALLOCATION FOR HI-TECH USES	ALLOCATION	37600	0	0	0	0	0	0	0	0	37600	0	0	0	0
Havant	DUNSBURY HILL FARM	PARK LANE	WATERLOOVILLE	DEVELOPMENT FOR B1/B2/B8 AND HOTEL USES	PERMISSION	42700	0	42700	0	0	0	0	0	0	0	0	0	0	0
Southampton City	FORMER EAST STREET SHOPPING CENTRE	EAST STREET	SOUTHAMPTON	REDEVELOPMENT FOR STUDENT FLATS & GROUND FLOOR RETAIL	PERMISSION	260	260	0	0	0	0	0	0	0	0	0	0	0	0
Havant	DUNSBURY HILL FARM	PARK LANE	WATERLOOVILLE	OUTLINE CONSENT FOR HOTEL/CONFERENCE FACILITY	PERMISSION	5574	0	0	0	5574	0	0	0	0	0	0	0	0	0
Havant	E BLOCK, FORMER BAE SYSTEMS	ELETTRA AVENUE	WATERLOOVILLE	CHANGE OF USE FROM INDUSTRIAL TO LEISURE AND/OR RETAIL	PERMISSION	4750	0	0	0	4750	0	0	0	0	0	0	0	0	0
Havant	FORMER COLT INTERNATIONAL SITE	NEW LANE	HAVANT	REDEVELOPMENT FOR MIXED USES INCLUDING 2860M2 OF EMPLOYMENT	PERMISSION	2860	0	2860	0	0	0	0	0	0	0	0	0	0	0
Havant	HERMITAGE PARK	HARTS FARM WAY NORTH	HAVANT	REDEVELOPMENT FOR B1/B2/B8 (LOCAL PLAN POLICY BD10)	PERMISSION	12097	0	12097	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	FORMER SILAGE BARN, NORTON FARM	SELBORNE ROAD	SELBORNE	CHANGE OF USE/REPLACEMENT FOR B8 WAREHOUSE	PERMISSION	576	0	576	0	0	0	0	0	0	0	0	0	0	0
Havant	LAND ADJACENT TO FULFLOOD ROAD	FULFLOOD ROAD	HAVANT	ERECTION OF B1A/B1B OFFICES AND B8 WAREHOUSE	PERMISSION	3030	0	3030	0	0	0	0	0	0	0	0	0	0	0
Havant	LAND AT KINGSCROFT FARM	MARPLES WAY	HAVANT	LOCAL PLAN ALLOCATION FOR B2/B8 INDUSTRY	ALLOCATION	10840	0	0	0	0	0	0	0	0	10840	0	0	0	0
Havant	LAND NORTH OF REGIONAL BUSINESS CENTRE	HARTS FARM WAY	HAVANT	LOCAL PLAN ALLOCATION FOR HI -TECH USES (POLICY BD9)	ALLOCATION	3360	0	0	0	0	0	0	0	0	3360	0	0	0	0
Winchester (Core)	GREENER LANDSCAPES LTD	THOMPSONS LANE	OWSLEBURY	STORAGE BUILDING	PERMISSION	264	0	264	0	0	0	0	0	0	0	0	0	0	0
Southampton City	GROUND FLOOR UNIT RS35	WEST QUAY SHOPPING CENTRE	SOUTHAMPTON	CHANGE OF USE OF RETAIL UNIT TO D2 LEISURE	PERMISSION	366	0	0	0	366	0	0	0	0	0	0	0	0	0
Portsmouth City	HARWIN ENGINEERS LTD	FITZHERBERT ROAD	PORTSMOUTH	CONSTRUCTION OF INFILL EXTENSION	PERMISSION	274	0	274	0	0	0	0	0	0	0	0	0	0	0
New Forest (Core)	ELING WHARF	ELING	TOTTON	ALLOCATION FOR EMPLOYMENT USE. POLICY TOT11	ALLOCATION	60000	0	0	0	0	0	0	0	0	60000	0	0	0	0
Gosport	HASLAR HOSPITAL	HASLAR ROAD	GOSPORT	MIXED USE REDEVELOPMENT INCLUDING A1 RETAIL	PERMISSION	339	339	0	0	0	0	0	0	0	0	0	0	0	0
New Forest (Core)	FORMER VERSALIS UK LTD SITE	CADLAND ROAD	FAWLEY	VACANT REDEVELOPMENT SITE	ALLOCATION	75200	0	0	0	0	0	0	0	0	75200	0	0	0	0
East Hampshire (Buffer)	HEADLEY PARK HOTEL	PICKETTS HILL	HEADLEY	73 BEDROOM HOTEL, 14 LODGES & 1 COTTAGE	PERMISSION	88	0	0	88	0	0	0	0	0	0	0	0	0	0
New Forest (Core)	HYTHE GASWORKS	CADLAND ROAD	HARDLEY	VACANT EXPANSION LAND	PERMISSION	18240	0	18240	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Marginal)	HILL FARM GARAGE	ANDOVER ROAD	SUTTON SCOTNEY	REDEVELOPMENT OF WORKSHOP FOR OFFICE, RECEPTION & STORE	PERMISSION	848	0	848	0	0	0	0	0	0	0	0	0	0	0
New Forest (Core)	LAND AT	HARRIER WAY	HARDLEY	INDUSTRIAL/STORAGE DEVELOPMENT	PERMISSION	2308	0	2308	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	HOLIDAY INN HOTEL WINCHESTER	TELEGRAPH WAY	WINCHESTER	EXTENSION TO EXISTING HOTEL TO PROVIDE ADDITIONAL ROOMS	PERMISSION	32	0	0	32	0	0	0	0	0	0	0	0	0	0
Eastleigh	HOME FARM	ST. JOHNS ROAD	HEDGE END	MIXED USE DEVELOPMENT INCLUDING B1(C) LIGHT INDUSTRIAL UNIT	PERMISSION	265	0	265	0	0	0	0	0	0	0	0	0	0	0
New Forest (Core)	LITTLE TESTWOOD FARM		TOTTON	ALLOCATION FOR EMPLOYMENT USES. POLICY TOT. 12	ALLOCATION	5200	0	0	0	0	0	0	0	0	5200	0	0	0	0
New Forest (Core)	MARCHWOOD & CRACKNORE INDUSTRIAL ESTATE	NORMANDY WAY	MARCHWOOD	DEVELOPMENT OF B1 (B) & (C), B2 AND B8 PLUS OPEN STORAGE	PERMISSION	29083	0	29083	0	0	0	0	0	0	0	0	0	0	0
New Forest (Core)	MARCHWOOD INDUSTRIAL PARK	NORMANDY WAY	MARCHWOOD	3 LIGHT INDUSTRIAL BUILDINGS	PERMISSION	1865	0	1865	0	0	0	0	0	0	0	0	0	0	0
New Forest (Core)	NEWMANS COPSE	HOUNSDOWN BUSINESS PARK	TOTTON	WAREHOUSE AND ANCILLARY OFFICES & MEZZANINE FLOOR	PERMISSION	5800	0	5800	0	0	0	0	0	0	0	0	0	0	0
Havant	INTERBRIDGES SITE	NORTH STREET	EMSWORTH	VETRINARY SURGERY AND 600M2 OF COMMERCIAL FLOORSPACE	PERMISSION	600	0	600	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Core)	JUBILEE HALL	CROUCH LANE	HORNDEAN	B1C WORKSHOP AND B1A OFFICE EXTENSIONS TO COMMUNITY HALL	PERMISSION	274	0	274	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	KEPPELS HEAD CAR PARK, 19-20	THE HARD	PORTSMOUTH	6 STOREY HOTEL AND CAFE	PERMISSION	24	0	0	24	0	0	0	0	0	0	0	0	0	0
Gosport	KFC/BURGER KING RESTAURANTS,	FAREHAM ROAD	GOSPORT	ERECTION OF A3 RESTAURANTS	PERMISSION	71	71	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	KIMPTON MANOR FARM	DOWN ROAD	KIMPTON	CHANGE OF USE FROM AGRICULTURAL TO B1/2/8, A1/2/3 OR D2 USES	PERMISSION	500	0	500	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	KNOWLE HOSPITAL	MAYLES LANE	KNOWLE	CHANGE OF USE OF PART OF SOUTH WING TO 4 OFFICE UNITS	PERMISSION	515	0	515	0	0	0	0	0	0	0	0	0	0	0
New Forest (Core)	PETRO-CHEMICAL WORKS		FAWLEY	VACANT EXPANSION LAND FOR PETRO-CHEMICAL USES	ALLOCATION	24000	0	0	0	0	0	0	0	0	24000	0	0	0	0
Portsmouth City	LAKESIDE BUSINESS PARK	WESTERN ROAD	COSHAM	A3 RESTAURANT	PERMISSION	680	680	0	0	0	0	0	0	0	0	0	0	0	0
New Forest (Core)	PETRO-CHEMICAL WORKS		FAWLEY	DEVELOPMENT RESTRICTED TO REFINERY RELATED USES	ALLOCATION	74000	0	0	0	0	0	0	0	0	74000	0	0	0	0
New Forest (Core)	SITE OF POND 1, MARCHWOOD INDUSTRIAL ESTATE	EAST ROAD	MARCHWOOD	FLEXIBLE EMPLOYMENT USES B1, B2 & B8	PERMISSION	14269	0	14269	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Core)	ADANAC PARK	ADANAC DRIVE	NURSLING	B1 DEVELOPMENT	PERMISSION	75012	0	75012	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Core)	BENHAM CAMPUS	UNIVERSITY PARKWAY	CHILWORTH	B1 DEVELOPMENT; EXTENSION TO EXISTING RESEARCH PARK	PERMISSION	4322	0	4322	0	0	0	0	0	0	0	0	0	0	0
New Forest (Core)	LAND ADJACENT TRIDENT BUSINESS	SHORE ROAD	HYTHE	6 INDUSTRIAL UNITS	PERMISSION	645	0	645	0	0	0	0	0	0	0	0	0	0	0

Southampton City	LAND ADJACENT WEST QUAY MULTI STOREY	HARBOUR PARADE	SOUTHAMPTON	ERECTION OF A HOTEL COMPRISING 209 HOTEL BEDROOMS	PERMISSION	209	0	0	209	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Core)	CASTLE HILL FARM	FLEXFORD ROAD	NORTH BADDESLEY	WAREHOUSE EXTENSION AND CANOPY	PERMISSION	1341	0	1341	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Core)	GANGER FARM	GANGER FARM LANE	ROMSEY	SPORTS PAVILION AND PITCHES	PERMISSION	2020	0	0	0	2020	0	0	0	0	0	0	0	0	0	0	0
Gosport	LAND AT	DOCK ROAD	GOSPORT	INDUSTRIAL ALLOCATION	ALLOCATION	520	0	0	0	0	0	0	0	0	0	0	0	520	0	0	0
Test Valley (Core)	OYSTER HOUSE	ANDES ROAD	NURSLING	EXTENSIONS TO COMMERCIAL VEHICLE SERVICING BUILDINGS	PERMISSION	2241	0	2241	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Core)	PHASE 2B NURSLING INDUSTRIAL ESTATE	MAURETANIA ROAD	NURSLING	ALLOCATION FOR STORAGE AND DISTRIBUTION	ALLOCATION	14800	0	0	0	0	0	0	0	0	0	0	0	14800	0	0	0
Test Valley (Core)	TROJANS AND HARDMOOR SPORTS GR	STONEHAM LANE	EASTLEIGH	NEW SPORTS CLUBHOUSE AND PITCHES	PERMISSION	3597	0	0	0	3597	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	LAND AT	PORTFIELD ROAD	PORTSMOUTH	B1/B2/B8 INDUSTRIAL UNIT	PERMISSION	972	0	972	0	0	0	0	0	0	0	0	0	0	0	0	0
New Forest (Marginal)	LAND AT	HANNAH WAY	LYMINGTON	BLOCK OF THREE INDUSTRIAL UNITS	PERMISSION	675	0	675	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Core)	UNIT 5 ROMSEY INDUSTRIAL ESTATE	GREATBRIDGE ROAD	ROMSEY	REDEVELOPMENT FOR 6 B1C INDUSTRIAL UNITS	PERMISSION	1203	0	1203	0	0	0	0	0	0	0	0	0	0	0	0	0
New Forest (Buffer)	LAND AT	CROW ARCH LANE & CROW LANE	RINGWOOD	MIXED USE DEVELOPMENT INCLUDING D2 FITNESS CENTRE	PERMISSION	200	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0
New Forest (Buffer)	LAND AT	CROW ARCH LANE AND CROW LANE	RINGWOOD	MIXED USE DEVELOPMENT INCLUDING 40 BED HOTEL	PERMISSION	40	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	LAND AT	PICKET TWENTY	ANDOVER	LOCAL CENTRE RETAIL DEVELOPMENT	PERMISSION	375	375	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Core)	LAND AT ABBOTSWOOD	CUPERNHAM LANE	ROMSEY	OFFICE UNITS IN LOCAL CENTRE	PERMISSION	495	0	495	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Core)	LAND AT ABBOTSWOOD	CUPERNHAM LANE	ROMSEY	PUBLIC HOUSE WITHIN LOCAL CENTRE	PERMISSION	749	749	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	4300	PARKWAY	WHITELEY	OFFICE DEVELOPMENT	PERMISSION	2423	0	2423	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Marginal)	LAND AT BARTON INDUSTRIAL ESTATE	OX DROVE WAY	UPPER WIELD	B2 INDUSTRIAL BUILDING	PERMISSION	484	0	484	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	LAND AT BEAVER INDUSTRIAL ESTATE	MIDHURST ROAD	LIPHOOK	BUSINESS UNIT AS PART OF RESIDENTIAL DEVELOPMENT SCHEME	PERMISSION	345	0	345	0	0	0	0	0	0	0	0	0	0	0	0	0
Eastleigh	LAND AT BOORLEY GREEN	WINCHESTER ROAD	BOTLEY	MIXED USE DEVELOPMENT INCLUDING RETAIL	PERMISSION	375	375	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eastleigh	LAND AT BOORLEY GREEN	WINCHESTER ROAD	BOTLEY	MIXED USE DEVELOPMENT INCLUDING A3	PERMISSION	320	320	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eastleigh	LAND AT BOORLEY GREEN	WINCHESTER ROAD	BOTLEY	MIXED DEVELOPMENT INCLUDING SPORTS PAVILION	PERMISSION	366	0	0	0	366	0	0	0	0	0	0	0	0	0	0	0
Eastleigh	LAND AT BOORLEY GREEN	WINCHESTER ROAD	BOTLEY	44 BEDROOM HOTEL EXTENSION AND LEISURE FACILITIES	PERMISSION	44	0	0	44	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	BARTON FARM	ANDOVER ROAD	WINCHESTER	MIXED DEVELOPMENT INCLUDING B1A OFFICES	PERMISSION	5000	3000	2000	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	BEREWOOD, W. OF WATERLOOVILLE EMPLOYMENT AREA	HOUGHTON AVENUE	WATERLOOVILLE	DEVELOPMENT FOR MIXED USES INCLUDING EMPLOYMENT	PERMISSION	77000	0	77000	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	CARFAX SITE	GLADSTONE STREET	WINCHESTER	MIXED USE SITE INCLUDING B1A OFFICES	ALLOCATION	2720	0	0	0	0	0	0	0	0	0	0	0	2720	0	0	0
New Forest (Buffer)	LAND AT CROW ARCH LANE AND CROW LANE	CROW	RINGWOOD	MIXED DEVELOPMENT INCLUDING A1/A2/A3 RETAIL	PERMISSION	300	300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	CHILCOMB PARK	CHILCOMB LANE	CHILCOMB	REDEVELOPMENT FOR BUSINESS, ENTERPRISE, AND INNOVATION PARK	PERMISSION	6325	0	6325	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	FORMER FRIARSGATE MEDICAL CENTRE	FRIARSGATE	WINCHESTER	CHANGE OF USE FROM MEDICAL CENTRE TO B1A OFFICES	PERMISSION	1858	0	1858	0	0	0	0	0	0	0	0	0	0	0	0	0
New Forest (Marginal)	LAND AT FOMER ARNEWOOD TURKEY	BARROWS LANE	SWAY	CHANGE USE OF PLOT A TO B8 STORAGE	PERMISSION	640	0	640	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	HUMPHREY FARMS	HAZELEY ROAD	TWYFORD	REDEVELOPMENT OF COMMERCIAL SITE FOR B1 & B8 UNITS	PERMISSION	4840	0	4840	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	LAND AT BOTTINGS INDUSTRIAL ESTATE	HILLSONS ROAD	BOTLEY	POLICY 57 LOCAL PLAN ALLOCATION FOR B1,B2,B8 USES	ALLOCATION	16240	0	0	0	0	0	0	0	0	0	0	0	16240	0	0	0
Southampton City	LAND AT HORSESHOE BRIDGE		SOUTHAMPTON	ALLOCATION FOR COMMERCIAL USE	PERMISSION	800	0	800	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	LAND AT BUSHFIELD CAMP	BADGER FARM ROAD	WINCHESTER	ALLOCATION FOR KNOWLEDGE PARK (POLICY RT.5/WT.3)	ALLOCATION	192000	0	0	0	0	0	0	0	0	0	0	0	######	0	0	0
Winchester (Core)	LAND AT LITTLE PARK FARM	LITTLE PARK FARM ROAD	FAREHAM	ALLOCATION FOR INDUSTRY	ALLOCATION	5200	0	0	0	0	0	0	0	0	0	0	0	5200	0	0	0
Winchester (Core)	LAND AT SEGENSWORTH NORTH,	CONCORD WAY	WHITELEY	BUSINESS PARK DEVELOPMENT	ALLOCATION	10960	0	0	0	0	0	0	0	0	0	0	0	10960	0	0	0
Winchester (Core)	LAND OPPOSITE TANNERY HOUSE	CONCORDE WAY	WHITELEY	B1/B2/B8 INDUSTRIAL UNIT	PERMISSION	1880	0	1880	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	LYCROFT FARM	PARK LANE	SWANMORE	CHANGE OF USE FROM AGRICULTURAL TO B1C AND B8	PERMISSION	1333	0	1333	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	LAND AT PICKET TWENTY	BRIDLE WAY	ANDOVER	MIXED DEVELOPMENT INCLUDING EMPLOYMENT	PERMISSION	940	0	940	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	LAND AT PICKET TWENTY	BRIDLE WAY	ANDOVER	MIXED DEVELOPMENT INCLUDING A3 RETAIL	PERMISSION	500	500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	NEW BARNS FARM	DROVE ROAD	SOUTHWICK	CHANGE OF USE OF BARNS FROM AGRICULTURAL TO B2 & B8	PERMISSION	1156	0	1156	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	NEWDOWN FARMS	LONDON ROAD	MICHELDEVER	REPLACE AGRICULTURAL BUILDING WITH NEW B8 STORAGE BUILDING	PERMISSION	1024	0	1024	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	LAND AT PRINCES STREET		SOUTHAMPTON	INDUSTRIAL ALLOCATION (WINPLAN)	ALLOCATION	120	0	0	0	0	0	0	0	0	0	0	0	120	0	0	0
Portsmouth City	LAND AT QUEEN STREET, HAVANT STREET	QUEEN STREET	PORTSMOUTH	120 BEDROOM HOTEL WITH ANCILLARY A3 USE AT GROUND FLOOR	PERMISSION	120	0	0	120	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	NORTH WINCHESTER FARM	STOKE CHARITY ROAD	KINGSWORTHY	CHANGE OF USE FROM AGRICULTURAL TO B1 & B8 USE	PERMISSION	4135	0	4135	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	NORTHFIELDS POULTRY FARM	NORTHFIELDS	TWYFORD	CHANGE OF USE OF FARM BUILDINGS TO B1 AND B8	PERMISSION	3361	0	3361	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Core)	LAND AT SLEEPY HOLLOW FARM	AMPFIELD HILL	AMPFIELD	REDEVELOPMENT FOR 3 B1A BUSINESS UNITS	PERMISSION	575	0	575	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	PLOTS 2000-2500 AND 3400	SOLENT BUSINESS PARK	WHITELEY	10 3 STOREY OFFICE UNITS	ALLOCATION	26594	0	0	0	0	0	0	0	0	0	0	0	26594	0	0	0
Winchester (Core)	SILVER HILL		WINCHESTER	ALLOCATION WIN4. MIXED DEVELOPMENT INCLUDING OFFICES	ALLOCATION	3920	0	0	0	0	0	0	0	0	0	0	0	3920	0	0	0
Eastleigh	LAND AT WIDE LANE/MITCHELL WAY		EASTLEIGH	EMPLOYMENT ALLOCATION FOR B2 USE	ALLOCATION	960	0	0	0	0	0	0	0	0	0	0	0	960	0	0	0
Eastleigh	LAND EAST OF	BOURNEMOUTH ROAD	EASTLEIGH	6-STOREY 153 BEDROOM HOTEL AND LEISURE FACILITIES	PERMISSION	153	0	0	0	153	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	SILVER HILL DEVELOPMENT	TANNER STREET	WINCHESTER	ALLOCATION WIN4 FOR MIXED DEVELOPMENT INCLUDING RETAIL	ALLOCATION	3920	0	0	0	0	0	0	0	0	0	0	0	3920	0	0	0
Winchester (Core)	SOLENT 2, AREA 12	SOLENT WAY	WHITELEY	B1 BUSINESS PARK.13HA WINCHESTER DISTRICT, 11HA IN FAREHAM	ALLOCATION	7600	0	0	0	0	0	0	0	0	0	0	0	7600	0	0	0
Winchester (Core)	THE CATTLEMARKET	ANDOVER ROAD	WINCHESTER	ALLOCATION FOR MIXED USES INCLUDING B1A OFFICES	ALLOCATION	5680	0	0	0	0	0	0	0	0	0	0	0	5680	0	0	0
Winchester (Core)	WESSEX GATE	MOORSIDE ROAD	WINCHESTER	REDEVELOPMENT OF SITE FOR B1/B2/B8.	PERMISSION	2277	0	2277	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	WINCHESTER SPORT AND LEISURE C	BAR END ROAD	WINCHESTER	SPORTS AND LEISURE CENTRE	PERMISSION	9937	0	0	0	9937	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	FORMER M.O.D. FIRING RANGES	TIPNER	PORTSMOUTH	ALLOCATION FOR EMPLOYMENT USE	ALLOCATION	30000	0	0	0	0	0	0	0	0	0	0	0	30000	0	0	0
Portsmouth City	LAND NORTH OF CATHERINE HOUSE	STANHOPE ROAD	PORTSMOUTH	152 BEDROOM HOTEL	PERMISSION	152	0	0	152	0	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	FORMER SELF DRIVE DEPOT	AIRPORT SERVICE ROAD	PORTSMOUTH	B2 WORKSHOP/MOT/AFTERSALES CENTRE	PERMISSION	1835	0	1835	0	0	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	LAKESIDE	WESTERN ROAD	PORTSMOUTH	MIXED DEVELOPMENT INCLUDING A1 RETAIL	PERMISSION	1160	1160	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	LAKESIDE BUSINESS PARK, E. OF	NORTHARBOUR	PORTSMOUTH	MIXED DEVELOPMENT INCLUDING OFFICES (69030M2), RETAIL, HOTEL	PERMISSION	69030	0	69030	0	0	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	LAND AT	ARUNDEL STREET	PORTSMOUTH	ALLOCATION SITE, POLICY CD2/DC30 FOR OFFICE DEVELOPMENT.	ALLOCATION	1800	0	0	0	0	0	0	0	0	0	0	0	1800	0	0	0
New Forest (Marginal)	LARK FARM	SHELLEY LANE	OWER	CHANGE OF USE OF NORTH AND CENTRAL BARNS TO B1/B8	PERMISSION	499	0	499	0	0	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	LAND AT HORSEA ISLAND EAST	PORT SOLENT	PORTSMOUTH	ALLOCATION FOR EMPLOYMENT USES	ALLOCATION	25000	0	0	0	0	0	0	0	0	0	0	0	25000	0	0	0
Portsmouth City	LAND AT PORT SOLENT	MARINA KEEP	PORT SOLENT	ALLOCATION FOR MIXED USES INCLUDING EMPLOYMENT	ALLOCATION	2000	0	0	0	0	0	0	0	0	0	0	0	2000	0	0	0
Portsmouth City	LAND AT TIPNER EAST	TIPNER	PORTSMOUTH	ALLOCATION FOR EMPLOYMENT USE	ALLOCATION	1000	0	0	0	0	0	0	0	0	0	0	0	1000	0	0	0
Portsmouth City	LAND NORTH OF	GOLDSMITH AVENUE	PORTSMOUTH	LOCAL PLAN ALLOCATION. REDEVELOPMENT FOR B1/B2/B8 USES	ALLOCATION	9600	0	0	0	0	0	0	0	0	0	0	0	9600	0	0	0
Southampton City	LOVERIDGE TRADING ESTATE	SOUTHBROOK ROAD	SOUTHAMPTON	REDEVELOPMENT FOR 6 B1B/B1C INDUSTRIAL UNITS	PERMISSION	252	0	252	0	0	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	PORTSDOWN TECHNOLOGY PARK	SOUTHWICK ROAD	COSHAM	REDEVELOPMENT FOR 2-4 STOREY OFFICES/LABORATORIES	PERMISSION	6857	0	6857	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Core)	MALTHOUSE COTTAGE	SOUTHAMPTON ROAD	ASHFIELD	REPLACEMENT WORKSHOP, OFFICE AND STORAGE	PERMISSION	450	0	450	0	0	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	QUEENSBURY SHELTERS	FITZHERBERT ROAD	PORTSMOUTH	REDEVELOPMENT FOR 17 B1/B2/B8 UNITS	PERMISSION	4154	0	4154	0	0	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	RAVELIN PARK	MUSEUM ROAD	PORTSMOUTH	CLASS D2 SPORTS AND LEISURE CENTRE	PERMISSION	4760	0	0	0	4760	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	VOYAGER PARK, PHASES 6-9	PORTFIELD ROAD	HILSEA	REDEVELOPMENT FOR B1/B2/B8 USES	PERMISSION	2083	0	2083	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Core)	MAYS COPPICE FARM	WHICHERS GATE ROAD	ROWLANDS CASTLE	CHANGE OF USE TO B8 STORAGE AND LINK EXTENSION	PERMISSION	378	0	378	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	516	PORTSMOUTH ROAD	SOUTHAMPTON	CHANGE OF USE FROM RETAIL WAREHOUSE TO B8 SELF STORAGE	PERMISSION	3422	0	3422	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Marginal)	MERRYFIELD FARM	SOAMES LANE	ROPLEY	CHANGE OF USE FROM AGRICULTURAL TO B1A OFFICES	PERMISSION	333	0	333	0	0	0	0	0	0	0	0	0	0	0	0	0

Test Valley (Buffer)	MOTLEY MILL	WEYHILL ROAD	WEYHILL	CHANGE OF USE FROM GRAIN STORE TO B1 AND B8	PERMISSION	906	0	906	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	N. WILLIAMS AND CO.	VICTORIA STREET	SOUTHAMPTON	ERECTION OF 959M2 B1(C) EXTENSION	PERMISSION	959	0	959	0	0	0	0	0	0	0	0	0	0	0	0	0
Eastleigh	NETLEY SAILING CLUB	ROYAL VICTORIA COUNTRY PARK	NETLEY ABBEY	TWO STOREY SAILING CLUB BUILDING	PERMISSION	235	0	0	0	235	0	0	0	0	0	0	0	0	0	0	0
Southampton City	390-392	SHIRLEY ROAD	SOUTHAMPTON	REDEVELOPMENT FOR LIDL FOODSTORE	PERMISSION	2200	2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	CENTURIAN BUSINESS PARK	BITTERNE WHARF	SOUTHAMPTON	RESIDUAL PHASE OF INDUSTRIAL PARK	ALLOCATION	1920	0	0	0	0	0	0	0	0	0	1920	0	0	0	0	0
Winchester (Marginal)	NEW FARM ENGINEERING	NEW FARM ROAD	ALRESFORD	REDEVELOPMENT FOR 4 DWELLINGS AND OFFICES	PERMISSION	356	0	356	0	0	0	0	0	0	0	0	0	0	0	0	0
Fareham	NEW PARK GARAGE	STATION ROAD	PARK GATE	ERECTION OF 10 FLATS & 4 COMMERCIAL UNITS (A1 OR A2)	PERMISSION	400	400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	NEW PLACE HOTEL, NEW PLACE	HIGH STREET	SHIRRELL HEATH	ALTERATIONS TO MAIN BUILDING FOR 14 ADDITIONAL HOTEL SUITES	PERMISSION	14	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	CHAPEL RIVERSIDE	ALBERT ROAD NORTH	SOUTHAMPTON	457 RESIDENTIAL UNITS, 4963M2 COMMERCIAL, 946M2 RETAIL	PERMISSION	4963	0	4963	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	COOPERVISION, UNIT 1 MOUNTPARK	WIDE LANE	SOUTHAMPTON	MEZZANINE FLOOR EXTENSION	PERMISSION	2570	0	2570	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	FMR. FORD CAR PARK/ ORION IND.	WIDE LANE	SOUTHAMPTON	CAR DEALERSHIPS WITH ANCILLARY WORKSHOPS	PERMISSION	12120	0	12120	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	FORMER BARGATE SHOPPING CENTRE	QUEENSWAY	SOUTHAMPTON	159 FLATS, RESTAURANTS, RETAIL & STUDENT ACCOMMODATION	PERMISSION	1548	1548	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	IKEA	WEST QUAY ROAD	SOUTHAMPTON	GROUND FLOOR EXTENSION TO EXISTING B8 WAREHOUSE	PERMISSION	1352	0	1352	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	LAND AT MOUNT PLEASANT ROAD	MOUNT PLEASANT ROAD	SOUTHAMPTON	INDUSTRIAL ALLOCATION	ALLOCATION	2800	0	0	0	0	0	0	0	0	0	2800	0	0	0	0	0
Southampton City	LEISURE WORLD	WEST QUAY ROAD	SOUTHAMPTON	LEISURE WORLD DWELLINGS, PLUS LEISURE, HOTEL, OFFICE	PERMISSION	28218	5490	9800	438	12490	5400	11650	0	0	0	0	0	0	0	0	0
Southampton City	LEVEL 00 PODIUM, BLOCKS J2 & J	JOHN THORNEYCROFT ROAD	SOUTHAMPTON	CHANGE OF USE FROM RETAIL TO LEISURE	PERMISSION	5732	0	0	0	5732	0	0	0	0	0	0	0	0	0	0	0
Southampton City	MARINE QUARTER, CENTENARY QUAY	VICTORIA ROAD	SOUTHAMPTON	REDEVELOPMENT OF SITE FOR MIXED USES INCLUDING INDUSTRY	PERMISSION	28381	0	28381	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	PARKER HOUSE	JOHN THORNEYCROFT ROAD	SOUTHAMPTON	CHANGE OF USE FROM D2 LEISURE TO B8 STORAGE & ADD MEZZANINE	PERMISSION	2478	0	2478	0	0	0	0	0	0	0	0	0	0	0	0	0
Havant	NORTHNEY MARINA	NORTHNEY ROAD	HAYLING ISLAND	SINGLE STOREY OFFICE EXTENSION	PERMISSION	250	0	250	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	OLD PARK FARM	FORGE ROAD	KINGSLEY	REDEVELOPMENT OF GRAIN STORE FOR B8 WAREHOUSE	PERMISSION	281	0	281	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	PRINCES STREET	NORTHAM	SOUTHAMPTON	INDUSTRIAL ALLOCATION (WINPLAN) VACANT LAND	ALLOCATION	1640	0	0	0	0	0	0	0	0	0	1640	0	0	0	0	0
Southampton City	ROYAL PIER WATERFRONT	WEST QUAY ROAD	SOUTHAMPTON	ALLOCATION FOR MIXED USES INCLUDING EMPLOYMENT	ALLOCATION	73036	0	0	0	0	0	0	0	0	0	73036	0	0	0	0	0
Southampton City	ROYAL PIER WATERFRONT	WEST QUAY ROAD	SOUTHAMPTON	AP23 Royal Pier Waterfront	ALLOCATION	3400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3400
Southampton City	ROYAL PIER WATERFRONT	WEST QUAY ROAD	SOUTHAMPTON	AP 23 IoW ferry terminal	ALLOCATION	2451	0	0	0	0	0	0	0	0	2451	0	0	0	0	0	0
Southampton City	STATION QUARTER SOUTHSIDE	WESTERN ESPLANADE	SOUTHAMPTON	ALLOCATION FOR MIXED USES INCLUDING OFFICES	ALLOCATION	17446	0	0	0	0	0	0	0	0	0	17446	0	0	0	0	0
Southampton City	UNITS 1-4 MILLHOUSE BUSINESS CENTRE	HAZEL ROAD	SOUTHAMPTON	REDEVELOPMENT OF SITE WITH B8 WAREHOUSE.	PERMISSION	2139	0	2139	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	PILGRIM HOUSE	CANUTE ROAD	SOUTHAMPTON	CHANGE OF USE FROM RESTAURANT TO B1A OFFICES	PERMISSION	565	0	565	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	PITT DOWN FARM	FARLEY MOUNT ROAD	HURSLEY	CHANGE OF USE FROM AGRICULTURAL TO B1/B8 USE	PERMISSION	411	0	411	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	UNITS A,B,C BROOKLANDS COURTYARD	FIRST AVENUE	SOUTHAMPTON	CHANGE OF USE FROM D1 TRAINING TO B1C, B2, B8	PERMISSION	1347	0	1347	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	PLOT 34, WALWORTH BUSINESS PARK	WALWORTH ROAD	ANDOVER	TWO INDUSTRIAL UNITS	PERMISSION	977	0	977	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	WATERMARK WEST QUAY, HARBOUR P	PORTLAND TERRACE	SOUTHAMPTON	MIXED USE DEVELOPMENT INCLUDING CINEMA	PERMISSION	16717	0	0	0	16717	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	PLOT 48, WALWORTH INDUSTRIAL ESTATE	SOUTH WAY	ANDOVER	PRODUCTION UNIT	PERMISSION	823	0	823	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	PLOT 66, WALWORTH BUSINESS PARK	SOUTH WAY	ANDOVER	CHANGE OF USE FROM B8 TO B2 AND EXTENSION	PERMISSION	926	0	926	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Marginal)	BUCKMORE FARM	BECKHAM LANE	PETERSFIELD	REDEVELOPMENT AND CONVERSION FOR B1 USE	PERMISSION	5528	0	5528	0	0	0	0	0	0	0	0	0	0	0	0	0
New Forest (Marginal)	CAIRD AVENUE	ASHLEY	NEW MILTON	B1 DEVELOPMENT	ALLOCATION	6480	0	0	0	0	0	0	0	0	0	6480	0	0	0	0	0
New Forest (Marginal)	PLOT D2 AMPRESS PARK	SOUTHAMPTON ROAD	LYMINGTON	3 B1 AND 2 B2 INDUSTRIAL UNITS	PERMISSION	670	0	670	0	0	0	0	0	0	0	0	0	0	0	0	0
New Forest (Marginal)	LAND EAST OF	CAIRD AVENUE	NEW MILTON	MIXED DEVELOPMENT INCLUDING B1/B2 INDUSTRIAL USES	ALLOCATION	16621	0	0	0	0	0	0	0	0	0	16621	0	0	0	0	0
New Forest (Marginal)	LAND EAST OF CAIRD AVENUE	CAIRD AVENUE	NEW MILTON	ALLOCATION FOR EMPLOYMENT, POLICY NMT.6	ALLOCATION	20000	0	0	0	0	0	0	0	0	0	20000	0	0	0	0	0
Eastleigh	PORT HAMBLE MARINA	SATCHELL LANE	HAMBLE-LE-RICE	ERECTION OF A REPLACEMENT INDUSTRIAL BUILDING	PERMISSION	940	0	940	0	0	0	0	0	0	0	0	0	0	0	0	0
New Forest (Marginal)	LAND SOUTH OF GORDLETON INDUSTRIAL ESTATE	HANNAH WAY	LYMINGTON	CONSTRUCT 4 BUILDINGS FOR B1-8 USE	PERMISSION	7140	0	7140	0	0	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	PORTSMOUTH PARK HOTEL	EASTERN ROAD	PORTSMOUTH	TWO A3/A5 RESTAURANT UNITS	PERMISSION	447	447	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	PREMIER INN	PORTSMOUTH ROAD	PORTSMOUTH	48 BEDROOM EXTENSION	PERMISSION	48	0	0	48	0	0	0	0	0	0	0	0	0	0	0	0
New Forest (Marginal)	PLOT J1 & J2 AMPRESS PARK	SOUTHAMPTON ROAD	LYMINGTON	INDUSTRIAL DEVELOPMENT	ALLOCATION	2280	0	0	0	0	0	0	0	0	0	2280	0	0	0	0	0
New Forest (Marginal)	SAWMILL BUILDINGS, EXBURY GARDENS	SUMMER LANE	EXBURY	EXTEND AND REFURBISH OUTBUILDINGS FOR COMMERCIAL USE	PERMISSION	1168	0	1168	0	0	0	0	0	0	0	0	0	0	0	0	0
Gosport	PRIDDYS HARD HERITAGE AREA	HERITAGE WAY	GOSPORT	MIXED USE DEVELOPMENT INCLUDING D2 LEISURE	PERMISSION	440	0	0	0	440	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Marginal)	CPV LTD, WOODINGTON MILL	WOODINGTON ROAD	WELLOW	B1/B2 COMMERCIAL UNIT	PERMISSION	2540	0	2540	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Marginal)	NEW ABBEY HOUSE	FYFIELD ROAD	WEYHILL	STORAGE BUILDING AND COVERED AREA	PERMISSION	1210	0	1210	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Marginal)	PHASE 2, THE GRANGE	ROMSEY ROAD	STONEYMARSH	B1 OFFICE ACCOMMODATION IN BLOCKS 100 AND 200	PERMISSION	1417	0	1417	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Marginal)	WEST DEAN SAWMILLS	EAST DEAN ROAD	WEST DEAN	ERECTION OF A SAWMILL BUILDING	PERMISSION	1673	0	1673	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	READYPOWER ENGINEERING	BASINGSTOKE ROAD	MICHELDEVER	B8 STORAGE UNIT AND STORAGE USE OF LAND	PERMISSION	360	0	360	0	0	0	0	0	0	0	0	0	0	0	0	0
New Forest (Marginal)	RHH FRANKS LTD, 96 GORE ROAD INDUSTRIAL ESTATE	GORE ROAD	NEW MILTON	TWO STOREY LIGHT INDUSTRIAL/STORAGE EXTENSION	PERMISSION	644	0	644	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)		34 STATION ROAD	LIPHOOK	THREE NEW WAREHOUSE BUILDINGS FOR B8	PERMISSION	2055	0	2055	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	RIVERS ENGINEERING	MOORSIDE ROAD	WINCHESTER	REPLACEMENT B2 UNIT AND ADDITIONAL A3/A5 COFFEE SHOP	PERMISSION	967	0	967	0	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Core)	ROWNHAMS WEST SERVICES	M.27 WESTBOUND	ROWNHAMS	40 BEDROOM HOTEL EXTENSION	PERMISSION	40	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	ALTON SPORTS CENTRE	CHAWTON PARK ROAD	ALTON	REPLACEMENT SPORTS CENTRE	PERMISSION	8500	0	0	0	8500	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	BIRDWORLD	FARNHAM ROAD	HOLT POND	PARTIAL REDEVELOPMENT OF BIRDWORLD	PERMISSION	3530	0	0	0	3530	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	BIRDWORLD AND FOREST LODGE	FARNHAM ROAD	HOLT POUND	REDEVELOPMENT OF BIRDWORLD AND FOREST LODGE GARDEN CENTRE	PERMISSION	6763	6763	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	LAND AT	WILSOM ROAD	ALTON	LOCAL PLAN ALLOCATION EMP2 FOR EMPLOYMENT USE	ALLOCATION	14080	0	0	0	0	0	0	0	0	0	14080	0	0	0	0	0
Winchester (Core)	SELHURST POULTRY FARM		SOBERTON HEATH	CHANGE OF USE OF AGRICULTURAL BUILDINGS TO B1 & B8	PERMISSION	751	0	751	0	0	0	0	0	0	0	0	0	0	0	0	0
New Forest (Marginal)	SETTERS FARM WORKSHOPS	MOUNT PLEASANT LANE	LYMINGTON	5 NEW B1(C) BUSINESS UNITS	PERMISSION	336	0	336	0	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Marginal)	SHORLEY FARM	SHORLEY LANE	BEAUWORTH	CHANGE OF USE FROM AGRICULTURAL TO B1/B8	PERMISSION	480	0	480	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	LAND AT BORDON GARRISON	BOLLEY AVENUE	BORDON	LEISURE CENTRE	PERMISSION	2727	0	0	0	2727	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	LAND AT LYNCH HILL	WATERBROOK ROAD	ALTON	LOCAL PLAN ALLOCATION EMP1 FOR EMPLOYMENT USES	ALLOCATION	37600	0	0	0	0	0	0	0	0	0	37600	0	0	0	0	0
Gosport	SITE 35, FORTON INDUSTRIAL ESTATE	TORONTO PLACE	GOSPORT	VACANT LAND	ALLOCATION	360	0	0	0	0	0	0	0	0	0	360	0	0	0	0	0
East Hampshire (Buffer)	LAND AT PRINCE PHILIP BARRACKS	HIGH STREET & BUDDS LANE	BORDON	ALLOCATION FOR 30,000M2 OF TOWN CENTRE RETAIL REDEVELOPMENT	ALLOCATION	30000	0	0	0	0	0	0	0	0	30000	0	0	0	0	0	0
East Hampshire (Buffer)	LAND EAST OF KARMA	FORGE ROAD	KINGSLEY	REDEVELOPMENT FOR REPLACEMENT B1A/B/C AND B2 UNITS	PERMISSION	1080	0	1080	0	0	0	0	0	0	0	0	0	0	0	0	0
Southampton City	SOUTHAMPTON HARBOUR HOTEL	5 MARITIME WALK	SOUTHAMPTON	LEISURE DEVELOPMENT FOR 36 HOTEL BEDROOMS	PERMISSION	36	0	0	36	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Core)	SPORTS PAVILION	SANDY LANE	NORTH BADDESLEY	2-STOREY EXTENSION TO SPORTS PAVILION	PERMISSION	509	0	0	0	509	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Marginal)	SPORTS PAVILION	BUCKHOLT ROAD	BROUGHTON	REPLACEMENT SPORTS PAVILION	PERMISSION	262	0	0	0	262	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	NORTHBROOK FARM	FARNHAM ROAD	BENTLEY	B1 LIGHT INDUSTRIAL AND ANCILLARY B8 STORAGE & DISTRIBUTION	PERMISSION	3500	0	3500	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	RIVERBROOK	WATERBROOK ROAD	ALTON	ALLOCATION FOR B1/B8 USE	ALLOCATION	3080	0	0	0	0	0	0	0	0	0	3080	0	0	0	0	0
Fareham	SWANWICK MARINA	-	SWANWICK	MIXED USE REDEVELOPMENT INCLUDING A3 RESTAURANT	PERMISSION	883	883	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Forest (Marginal)	SWAYLET FARM	ARNEWOOD BRIDGE ROAD	SWAY	REPLACEMENT UNITS	PERMISSION	476	0	476	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	'TECHFOREST', FORMER LOUISBURG		BORDON	CONSENT FOR B1, B2 & D1 USES	PERMISSION	13530	0	13530	0	0	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	UNIT 1-2	MILL LANE	ALTON	A1 RETAIL REDEVELOPMENT	PERMISSION	6112	6112	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Test Valley (Marginal)	THE DELL	DOCTORS HILL	SHERFIELD ENGLISH	LIGHT INDUSTRIAL WORKSHOP EXTENSION	PERMISSION	325	0	325	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	THE LION	PENTON PARK LANE	CLANVILLE	ADDITION OF 10 HOTEL BEDROOMS	PERMISSION	10	0	0	10	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	WOOLMER TRADING ESTATE	SOUTH OF WOOLMER WAY	BORDON	EMPLOYMENT AND LEISURE DEVELOPMENT	PERMISSION	7297	0	7297	0	0	0	0	0	0	0	0	0	0	0
New Forest (Buffer)	THE OFFICE, REDBROOK	RINGWOOD ROAD	FORDINGBRIDGE	CHANGE OF USE TO B1A OFFICE	PERMISSION	390	0	390	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Marginal)	THE RED LION, NO. 3	COLLEGE STREET	PETERSFIELD	CONVERSION OF PUB & MASONIC HALL TO 17 HOTEL ROOMS	PERMISSION	17	0	0	17	0	0	0	0	0	0	0	0	0	0
New Forest (Marginal)	THE YEWS	SOUTHAMPTON ROAD	CADNAM	NEW BUILDING FOR B1 USE	PERMISSION	324	0	324	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Core)	TIBBLES BARN	HIGHWOOD LANE	ROMSEY	REBUILD/EXTEND BARN FOR OFFICE USE	PERMISSION	388	0	388	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	TIPNER EAST	TWYFORD AVENUE	PORTSMOUTH	MIXED DEVELOPMENT INCLUDING A1/A2/A3/A5 RETAIL FLOORSPACE	PERMISSION	237	237	0	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	TIPNER EAST, PHASE 4	TWYFORD AVENUE	PORTSMOUTH	MIXED USE REDEVELOPMENT INCLUDING RETAIL	PERMISSION	235	235	0	0	0	0	0	0	0	0	0	0	0	0
New Forest (Buffer)	LAND AT EMBANKMENT WAY		RINGWOOD	INDUSTRIAL/OFFICE DEVELOPMENT	PERMISSION	3372	0	3372	0	0	0	0	0	0	0	0	0	0	0
Southampton City	UNIT 1, ASSOCIATED BRITISH PORTS	TOWN QUAY	SOUTHAMPTON	CHANGE OF USE & EXTENSION OF RESTAURANT TO FORM B1A OFFICES	PERMISSION	618	0	618	0	0	0	0	0	0	0	0	0	0	0
Eastleigh	UNIT 1, SWAN CENTRE	WELLS PLACE	EASTLEIGH	CHANGE OF USE FROM RESTAURANT TO D2 FITNESS STUDIO	PERMISSION	496	0	0	0	496	0	0	0	0	0	0	0	0	0
New Forest (Buffer)	LAND N. & W. OF SANDLEHEATH INDUSTRIAL ESTATE	OLD BRICKYARD ROAD	SANDLEHEATH	B1/B2/B8 DEVELOPMENT	PERMISSION	1967	0	1967	0	0	0	0	0	0	0	0	0	0	0
Havant	UNIT 19	ARNSIDE ROAD	WATERLOOVILLE	MEZZANINE FLOOR FOR ANCILLARY OFFICE USE	PERMISSION	684	0	684	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	UNIT 2 , VENTURE SIDING	GOLDSMITH AVENUE	SOUTHSEA	CHANGE OF USE FROM AUCTION HALL TO D2 SNOOKER HALL	PERMISSION	322	0	0	0	322	0	0	0	0	0	0	0	0	0
Eastleigh	UNIT 2A DEER PARK FARM INDUSTRIAL ESTATE	KNOWLE LANE	FAIR OAK	REPLACEMENT INDUSTRIAL BUILDING	PERMISSION	600	0	600	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	UNIT 2A, BLACKNEST INDUSTRIAL	BLACKNEST ROAD	BINSTEAD	BUILDING COMPRISING 6 UNITS; DEMOLITION OF 6 EXISTING UNITS	PERMISSION	810	0	810	0	0	0	0	0	0	0	0	0	0	0
Winchester (Marginal)	UNIT 3	PROSPECT ROAD	ALRESFORD	EXTENSION TO B1(C) BUILDING	PERMISSION	236	0	236	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	UNIT 3600A	PARKWAY	WHITELEY	CHANGE OF USE FROM D1 TO D2 GYM	PERMISSION	251	0	0	0	251	0	0	0	0	0	0	0	0	0
Eastleigh	UNIT 4	WOODSIDE ROAD	EASTLEIGH	WAREHOUSE/MANUFACTURING/OFFICE EXTENSION	PERMISSION	300	0	300	0	0	0	0	0	0	0	0	0	0	0
Eastleigh	UNIT 5 BROOKWOOD AVENUE	BROOKWOOD AVENUE	EASTLEIGH	EXTENSION TO EXISTING LIGHT INDUSTRIAL UNIT	PERMISSION	300	0	300	0	0	0	0	0	0	0	0	0	0	0
New Forest (Buffer)	LAND WEST OF	CROW LANE	RINGWOOD	MIXED DEVELOPMENT INCLUDING B1 AND B2 INDUSTRY	PERMISSION	6000	0	6000	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Core)	UNIT 7 FROBISHER INDUSTRIAL CENTRE	BUDDS LANE	ROMSEY	B1C INDUSTRIAL UNIT	PERMISSION	242	0	242	0	0	0	0	0	0	0	0	0	0	0
Eastleigh	UNIT B, DEACON TRADING ESTATE	CHICKENHALL LANE	EASTLEIGH	EXTENSIONS TO INDUSTRIAL/WAREHOUSE UNIT	PERMISSION	894	0	894	0	0	0	0	0	0	0	0	0	0	0
Southampton City	UNIT B, SHIRLEY RETAIL PARK, 2	WINCHESTER ROAD	SOUTHAMPTON	MEZZANINE FLOOR EXTENSION	PERMISSION	211	211	0	0	0	0	0	0	0	0	0	0	0	0
Eastleigh	UNIT C, WOODSIDE TRADE CENTRE	PARHAM DRIVE	EASTLEIGH	FIRST FLOOR MEZZANINE EXTENSION	PERMISSION	543	0	543	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	ANDOVER BUSINESS PARK	MONXTON ROAD	ANDOVER	BUSINESS PARK DEVELOPMENT FOR B1/B2/B8 USES	PERMISSION	66678	0	66678	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	FAIRGROUND SITE	FAIRVIEW ROAD	WEYHILL	REDEVELOPMENT OF BUILDERS YARD FOR B1/B2/B8 USES	PERMISSION	1373	0	1373	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	UNITS R77 & L08,	GUNWHARF QUAYS	PORTSMOUTH	MEZZANINE FLOOR FOR B8 STORAGE TO RETAIL UNITS	PERMISSION	360	0	360	0	0	0	0	0	0	0	0	0	0	0
East Hampshire (Marginal)	UPPER ADHURST FARM	LONDON ROAD	LISS	REDEVELOPMENT/REPLACE INDUSTRIAL UNITS	PERMISSION	675	0	675	0	0	0	0	0	0	0	0	0	0	0
Portsmouth City	VENTURE SIDING	GOLDSMITH AVENUE	PORTSMOUTH	TWO B8 UNITS WITH TRADE COUNTERS	PERMISSION	335	0	335	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Marginal)	VILLAGE HALL	HIGH STREET	BROUGHTON	SINGLE STOREY REAR EXTENSIONS	PERMISSION	298	0	0	0	298	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	LAND AT ANDOVER BUSINESS PARK	HAWKER SIDDELEY WAY	ANDOVER	ERECTION OF A GYM	PERMISSION	1394	0	0	0	1394	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	LAND AT EAST ANTON	SMANNELL ROAD	SMANNELL	MIXED DEVELOPMENT INCLUDING EMPLOYMENT	PERMISSION	2000	0	2000	0	0	0	0	0	0	0	0	0	0	0
Eastleigh	VT SPORTS GROUND	PORTSMOUTH ROAD	BURSLEDON	SPORTS PAVILION	PERMISSION	286	0	0	0	286	0	0	0	0	0	0	0	0	0
East Hampshire (Buffer)	WARREN SIGNS, LITTLE EASTFIELD	WOLFS LANE	CHAWTON	REDEVELOPMENT FOR REPLACEMENT COMMERCIAL BUILDINGS	PERMISSION	460	0	460	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	LAND AT HAREWOOD FARM	LONDON ROAD	ANDOVER	REDEVELOP AGRICULTURAL BUILDINGS FOR B1C/B2 INDUSTRIAL UNITS	PERMISSION	3767	0	3767	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	LAND AT WALWORTH INDUSTRIAL ESTATE	WALWORTH ROAD	ANDOVER	INDUSTRIAL/WAREHOUSE DEVELOPMENT	PERMISSION	45300	0	45300	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	MERIDIAN PARK	GREENWICH WAY	ENHAM ARCH	B1/B2 INDUSTRIAL UNITS, B1A UNIT AND DEPOT/WORKSHOP	ALLOCATION	1400	0	0	0	0	0	0	0	0	0	0	1400	0	0
Southampton City	WATERMARK WEST QUAY, HARBOUR PARADE	PORTLAND TERRACE	SOUTHAMPTON	MIXED USE DEVELOPMENT INCLUDING HOTEL	PERMISSION	337	0	0	337	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	PLOT 20, EAST PORTWAY	WATT CLOSE	ANDOVER	VACANT EXPANSION LAND	ALLOCATION	1320	0	0	0	0	0	0	0	0	0	0	1320	0	0
Test Valley (Buffer)	PLOT 35, WALWORTH INDUSTRIAL	SOUTH WAY	ANDOVER	REDEVELOPMENT FOR TWO B2/B8 UNITS	PERMISSION	5717	0	5717	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	PLOT 73, WALWORTH BUSINESS PARK	COLUMBUS WAY	ANDOVER	A1 RETAIL FOODSTORE AND TWO A1/A3/A5 RETAIL UNITS	PERMISSION	2624	2624	0	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	PLOT 79-82, WALWORTH INDUSTRIAL ESTATE	LIVINGSTONE ROAD	ANDOVER	LIGHT INDUSTRY/WAREHOUSE DEVELOPMENT	ALLOCATION	1360	0	0	0	0	0	0	0	0	0	0	1360	0	0
East Hampshire (Buffer)	WEST END FARM	SPOLLYCOMBE LANE	UPPER FROYLE	PRIOR APPROVAL, CHANGE OF USE FROM AGRICULTURE TO B8	PERMISSION	382	0	382	0	0	0	0	0	0	0	0	0	0	0
Test Valley (Marginal)	WHITE HART INN	HIGH STREET	STOCKBRIDGE	10 BEDROOM LETTING ACCOMMODATION BLOCK	PERMISSION	10	0	0	10	0	0	0	0	0	0	0	0	0	0
Test Valley (Marginal)	WHITE HORSE SERVICES	OLD STOCKBRIDGE ROAD	MIDDLE WALLOP	RETAIL EXTENSION TO FILLING STATION	PERMISSION	245	245	0	0	0	0	0	0	0	0	0	0	0	0
Winchester (Marginal)	WHITEDALE FARM OFFICE	EAST STREET	HAMBLEDON	CHANGE OF USE FROM AGRICULTURAL TO B1A & A2	PERMISSION	225	0	225	0	0	0	0	0	0	0	0	0	0	0
Winchester (Core)	WINCHESTER ROYAL HOTEL	ST. PETER STREET	WINCHESTER	17 BEDROOM EXTENSION	PERMISSION	17	0	0	17	0	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	THE NEW BARN	WALWORTH ROAD	PICKET PIECE	NEW B1-8 UNIT AND EXTENSION TO EXISTING	PERMISSION	2193	0	2193	0	0	0	0	0	0	0	0	0	0	0
New Forest (Marginal)	WOODLANDS LODGE HOTEL	BARTLEY ROAD	WOODLANDS	FITNESS CENTRE; WEDDING PAVILION	PERMISSION	635	0	0	0	635	0	0	0	0	0	0	0	0	0
Test Valley (Buffer)	VIRGINIA WORKS	GREENWICH WAY	ANDOVER	REDEVELOPMENT FOR 2-STOREY B1(C), B2 AND B8 INDUSTRIAL UNITS	PERMISSION	3915	0	3915	0	0	0	0	0	0	0	0	0	0	0

SRTM REF CASE

District	Scheme	Description	2019	2026	2031	2036	2041
COMMITTED AND INCLUDED IN CURRENT REFERENCE CASE							
Portsmouth, Isle of Wight, Havant, Fareham	Portsmouth City Region TCF- Committed schemes package	Package of schemes of various types, including bus priority, interchange, highway / junction improvement, and active travel schemes		✔	✔	✔	✔
Southampton. Eastleigh, New Forest	Southampton City Region TCF- Committed schemes package	Package of schemes of various types, including bus priority, interchange, highway / junction improvement, and active travel schemes		✔	✔	✔	✔
East Hampshire	Green Lane, Clanfield	Traffic calming	✔	✔	✔	✔	✔
Eastleigh	A335 Leigh Rd / Passfield Avenue	Junction capacity changes	✔	✔	✔	✔	✔
Eastleigh	Sundays Hill Bypass	New road alignment with 7.3m carriageway width and 30mph speed limit	✔	✔	✔	✔	✔
Eastleigh	St John's Link Road	6.5m carriageway width and 30mph speed limit		✔	✔	✔	✔
Eastleigh	Chestnut Avenue / Stoneham Lane Roundabout	Roundabout improvements	✔	✔	✔	✔	✔
Eastleigh	Chestnut Avenue / Passfield Avenue Roundabout	Roundabout improvements		✔	✔	✔	✔
Eastleigh	Burnett's Lane Link Road and roundabout	New road alignment between Burnetts Lane and Bubb Lane, extending to access road to Fir Tree Lane. 7.3m carriageway width and 30mph speed limit. Traffic calming or potential closure of Burnetts Lane south of access roundabout.		✔	✔	✔	✔
Eastleigh	Botley Road / Burnett's Lane	Signals		✔	✔	✔	✔
Eastleigh	Allington Lane / B3037 Fair Oak Road/ Sandy Lane	Signals/ additional lanes between junctions		✔	✔	✔	✔
Eastleigh	Botley Bypass	New road between Kings Corner (A3051/ A334 jucntion) and Woodhouse Lane (NE of Hedge End) and associated junctions etc		✔	✔	✔	✔
Eastleigh	Southampton Road / Chestnut Avenue	Addition of a right turn lane (4 pcus)		☒	☒	☒	☒
Eastleigh	North Stoneham Park development access & link road	Development spine road from Chestnut Avenue near junction with Nightingale Ave (new signalised junction), through development to Stoneham Lane (new roundabout opp concorde club). Diversion of "old" Stoneham Lane to link to spine road		✔	✔	✔	✔
Eastleigh	B3037 Mortimers Lane/ B3354 Winchester Road junction, Fair Oak	Enlarged junction		✔	✔	✔	✔
Eastleigh	B3037 Eastleigh Rd/ B3354 Botley Rd / Stubbington Way junction, Fair Oak	Signalised junction improvements		✔	✔	✔	✔
Eastleigh	Boorley Green development access	New roundabout on B3354 Winchester Road giving access to site	✔	✔	✔	✔	✔
Eastleigh	Boorley Gardens development access	New roundabout on B3354 Winchester Road giving access to site (located south of Boorley Green development roundabout)		✔	✔	✔	✔
Eastleigh	Maypole Roundabout Hedge End	Enlargement of roundabout	✔	✔	✔	✔	✔
Eastleigh	M27 J7 technology improvements	MOVA/ SCOOT implementation		✔	✔	✔	✔
Eastleigh	A3024 Bursledon Rd access to west of Hamble Lane housing developments	New signalised junction on Bursledon Road		✔	✔	✔	✔
Eastleigh	Woodside Avenue/Judd Close, Eastleigh	Fourth arm added to signal junction; ped crossings added	✔	✔	✔	✔	✔
Eastleigh	Winchester Road/Eastleigh Road/Stubbington Way, Fair Oak	MOVA control introduced	✔	✔	✔	✔	✔
Fareham	St Margarets Rbt.	Improvement scheme	✔	✔	✔	✔	✔
Fareham	Peel Common Rbt.	Improvement scheme	✔	✔	✔	✔	✔
Fareham	Gudge Heath Lane	Additional lanes at signals Gudge Heath Lane / The Avenue	✔	✔	✔	✔	✔
Fareham	A27 Southampton Road, Fareham	Widening of carriageway (A27 dualling)	✔	✔	✔	✔	✔
Fareham	Newgate Lane South, Fareham		✔	✔	✔	✔	✔
Fareham	Station Roundabout (The Avenue approach)	Widening of The Avenue and around Station Roundabout	✔	✔	✔	✔	✔
Fareham	Stubbington Bypass	Bypass		✔	✔	✔	✔
Fareham	Peel Common Rbt.	Peel common roundabout Stubbington Bypass scheme		✔	✔	✔	✔
Fareham	A27 East St/Castle Trading Estate, Portchester	MOVA control introduced	✔	✔	✔	✔	✔
Fareham	A27 Downend Rd Portchester	Downend Road widened to 2 lane approach		✔	✔	✔	✔
Gosport	BRT Eclipse Extension	Eclipse Busway extended 1km south to Rowner Road		✔	✔	✔	✔
Gosport	B3333 South Street / Dock Road, Gosport	Conversion of T junction to new 3 arm signal junction	✔	✔	✔	✔	✔
Gosport	Stubbington Lane/Daedalus Spine Road 'Ross House', Lee-on-the-Solent	New 3 arm signal junction	✔	✔	✔	✔	✔
Gosport	Privett Rd / Bury Rd, Gosport	MOVA control introduced	✔	✔	✔	✔	✔
Gosport	Heritage Way/Retail Park, Gosport	New 3 arm signal junction- access to new retail park at Fort Brockhurst	✔	✔	✔	✔	✔
Gosport	Rowner Road/Carisbrooke Road, Gosport	MOVA control introduced	✔	✔	✔	✔	✔
Gosport	A32 Brockhurst Gate retail park junction	Lining and lane changes on A32 Northbound (southern arm of junction)		✔	✔	✔	✔
Gosport	A32 Wych Lane	Junction Improvement- extension to right turn lane on southbound carriageway north of the signals.		✔	✔	✔	✔
Fareham	A32 Quay Street SCOOT	Implementation of SCOOT signal optimisation		✔	✔	✔	✔
Fareham, Gosport	Stubbington Bypass mitigation measures	Mitigation measures in Gosport as included in Stubbington Bypass Business Cases		✔	✔	✔	✔
Fareham, Winchester	M27 J9 and Parkway South roundabout	Capacity increases and signalisation		✔	✔	✔	✔
Winchester	Whiteley Way/ Parkway northern junction	Conversion of T junction to signalised T junction		✔	✔	✔	✔
Winchester	Whiteley Way/ retail park junction	Conversion of roundabout to signalised T junction		✔	✔	✔	✔
North Whiteley	Whiteley Way extension	Northward extension of Whiteley Way from current terminus, via North Whiteley major development site, to A3051 Botley Road north of Curbridge		✔	✔	✔	✔
North Whiteley	North Whiteley bus network and speed limit changes	Developer funded bus network for North Whiteley development and alteration to speed limits on parts of existing network adjacent to development		✔	✔	✔	✔
Havant	Hulbert Rd / Purbook Way Junction (Dunsbury Hill)	Major redesign and partial signalisation of 'ASDA' rbt.	✔	✔	✔	✔	✔
Havant	Dunsbury Hill Farm Business Park	New site access roundabout on Hulbert Rd B2150	✔	✔	✔	✔	✔
Gosport	A3(M) J3	Signalisation of N/B off slip onto roundabout		✔	✔	✔	✔
Havant	Purbook Way / College Road	Signalisation of priority junction		✔	✔	✔	✔
Havant	Interbridges	New signal access (off B2148 between Emsworth rail bridge and A27)		✔	✔	✔	✔
Havant	Purbrook Way / Stakes Hill Road	Replacement of roundabout with traffic signals.		✔	✔	✔	✔
Havant	Purbrook Way from Stakes Hill Road to College Road	Dual carriageway to replace single carriageway.		✔	✔	✔	✔
Havant	Hulbert Rd / Frendstaple Rd / Tempest Ave	Enlarge and modify existing roundabout.		✔	✔	✔	✔
Havant	West of Waterlooville development access/ link road	Pedestrian walkway improvmenets along Isambard Brunel road, including widening footways, segregating cycling from pedestrians and improved pedestrian crossing points			☒	☒	☒
Havant	Harts Farm Way / Southmoor Ln mini roundabout	Improved cycle crossing access and segregated cycle lanes with carriageway widening to accommodate, traffic calming/restricting measures for safer cycle routes.	✔	✔	✔	✔	✔
Havant	Barncroft Way/ New Road	Improved cycle crossing facilities and cycle corridors with priority access	✔	✔	✔	✔	✔
Isle of Wight	Ladybridge Roundabout	Ryde Transport Hub, Pier cycle & walkway corridor improvements		✔	✔	✔	✔
Isle of Wight	A259 Havant Road east of A27 Warblington Junction	New signalised junction for access to Land North of Havant Road development		✔	✔	✔	✔
Isle of Wight	A27/A259 Warblington Junction	Secured improvements at this junction linked to Land North of Havant Road development		✔	✔	✔	✔
Isle of Wight	Eagle Avenue Wecock Farm- mini roundabout	New mini roundabout for Woodcroft development site		✔	✔	✔	✔
Havant	NCN22 improvments through Centenary Gardens and Havant Rail Staion Forecourt	Cycle & Pedestrian infractructure improvements through Centenary Gardens and Havant Rail Staion Forecourt	☒	✔	✔	✔	✔
Havant	Bartons Road right turn lane	Right turn lane (access to development)	✔	✔	✔	✔	✔
Havant	Bartons Rd/Petersfield Rd	Extended left turn lane from Bartons Rd into Petersfield Rd		✔	✔	✔	✔
Havant	Hambledon Road/Aston Road, Waterlooville	Cycle lanes on Lake road entiehr side of Church Street Roundabout	✔	✔	✔	✔	✔
Havant	Park Road South/Solent Road, Havant	SCOOT control peak times; MOVA control off peak introduced	✔	✔	✔	✔	✔
Havant	E2(BRT) - Welborne - Fareham BRT E2 extension	Changes to Welbourne BRT route, where it becomes an extension to route E2	✔	✔	✔	✔	✔

Havant	Route 2 - The Hard to Paulsgrove	Bus rerouting that no longer serves Cosham Int, Highbury Buildings, Donaldson Rd, St		✔	✔	✔	✔
Havant/ Portsmouth	Route 3 - Portsmouth - Portchester Precinct	Bus rerouting that no longer serves Cosham Int, Highbury Buildings, Donaldson Rd, St Agatha's	✔	✔	✔	✔	✔
Isle of Wight	Route 3 - Portsmouth - Fareham	Bus rerouting that no longer serves Cosham Int, Highbury Buildings, Donaldson Rd, St Agatha's	✔	✔	✔	✔	✔
Southampton	Route X4 - Southampton - Fareham	Installation of new roundabout. Signalisation of junction with Shide Road. Widening of approach to two lanes at St Georges approach roundabout	✔	✔	✔	✔	✔
Isle of Wight	Route E1 - Gosport - Fareham - Portsmouth (via Elson)	Extenion bus route E1 to Portsmouth (previusly stopped at Fareham)		✔	✔	✔	✔
Isle of Wight	Route 7 - Waterlooville-Portsmouth direct rapid transit service	Changes to bus routing and services for Route 7			✔	✔	✔
Portsmouth	Route 8 - Waterlooville-Portsmouth direct rapid transit service	Changes to bus routing and services for Route 8	✔	✔	✔	✔	✔
Portsmouth	Route 18 - Southsea - Paulsgrove	Bus route changes that not serve St Agatha's	✔	✔	✔	✔	✔
Portsmouth	Route 20 - Havant - The Hard	Bus route changes that do not serve St Agatha's	✔	✔	✔	✔	✔
Portsmouth	Route 23 - Leigh Park - The Hard	Bus route changes that do not serve Cosham Int, Highbury Buildings, Donaldson Rd, St Agatha's	✔	✔	✔	✔	✔
Portsmouth	Route 700 - Flansham Park - Portsmouth	Route change to serve City Shops North	✔	✔	✔	✔	✔
Portsmouth	PnR(Tipner) Route 1 - Tipner - The Hard	Route change to serve City Shops North	✔	✔	✔	✔	✔
Portsmouth	A27 Southampton Rd Port Way (Port Solent Access)	Signal timing update	✔	✔	✔	✔	✔
Portsmouth	Aldi Store Access, Southampton Road- Paulsgrove	Signal timing update	✔	✔	✔	✔	✔
Portsmouth	Anglesea Road Queens Street Alfred Road Bishop Crispian Way	Signal timing update	✔	✔	✔	✔	✔
Portsmouth	Eastney Rd Bransbury Rd Devonshire Ave	Signal timing update	✔	✔	✔	✔	✔
Portsmouth	Fratton Road Lake Road	Signal timing update	✔	✔	✔	✔	✔
Portsmouth	Goldsmith Avenue Milton Road Eastney Road	Signal timing update	✔	✔	✔	✔	✔
Portsmouth	Goldsmith Avenue Priory Crescent Winter Road	Signal timing update	✔	✔	✔	✔	✔
Portsmouth	Kingston Road Kingston Crescent - North End	Signal timing update	✔	✔	✔	✔	✔
Portsmouth	M275 A3 A27, Marriott Junction	Signal timing update	✔	✔	✔	✔	✔
Portsmouth	Market Way Alfred Road Unicorn Road	Signal timing update	✔	✔	✔	✔	✔
Portsmouth	Mile End Road Trafalgar Link Road	Signal timing update	✔	✔	✔	✔	✔
Portsmouth	Milton Road Velder Avenue	Signal timing update	✔	✔	✔	✔	✔
Portsmouth	Milton Rd/ Priory Crescent	Alterations to flares/ kerbing at junction		✔	✔	✔	✔
Portsmouth	Fratton Road/Arundel Street	Junction staging revised to provide indicative right-turn (into Arundel Street), MOVA control and new pedestrian crossing facilities added across Arundel Street and the northern arm of Fratton Road.	✔	✔	✔	✔	✔
Portsmouth	Copnor Road/Norway Road	MOVA installed and pedestrian phases added into junction (all arms - walk with traffic)	✔	✔	✔	✔	✔
Portsmouth	London Road/Southwick Hill Road	MOVA installed and new pedestrian phase across Southwick Hill Road	✔	✔	✔	✔	✔
Portsmouth	High Street(Cosham)/Spur Road	Junction refurbished with new all-round pedestrian phase and MOVA	✔	✔	✔	✔	✔
Portsmouth	Copnor Road / Burrfields Road / Stubbington Ave	MOVA for signals on key bus route		✔	✔	✔	✔
Portsmouth	Fratton Road / Lake Road / St Mary's Rd	MOVA for signals on key bus route		✔	✔	✔	✔
Portsmouth	Eastern Rd / Havant Rd / Farlington Ave	MOVA for signals on key bus route		✔	✔	✔	✔
Portsmouth	Portsmouth City Centre - Clean Air Zone	Government mandated CAZ to be rolled out to address NOx exceedances which will charge a fee for HGV, Bus/Coach & Taxis that fall below Euro 4/6 standards.		✔	✔	✔	✔
Portsmouth	Southsea Sea Defences	One-way traffic restriction applied to Clarence Esplanade between Serpentine Rd (Aquarium) and Clarence Pier interchange. Traffic will be one-way westbound.		✔	✔	✔	✔
Portsmouth	Western Road (A27) Speed limit reduction from NSL to 50mph	Reduced speed limit. Older scheme not previously captured.	✔	✔	✔	✔	✔
Portsmouth	A27 Southampton Road - new development access	New access to north of A27 between Port Solent and Portchester, includes altered lane merge on A27		✔	✔	✔	✔
Portsmouth	Dundas Lane/Dundas spur roundabout- new 4th arm	New arm to provide access to Admiral Lord Nelson School		✔	✔	✔	✔
Portsmouth	Various pedestrian crossing schemes	Ped crossing schemes at: Tiger crossing Fawcett Road jct/w Fratton Bridge Roundabout - included loss of flared lane at Fawcett Rd entry to roundabout; Zebra Crossing across Albert Road immediately east of junction with Francis Avenue; Traffic signal crossing Duisburg Way (approx. 90m east of roundabout at Pier Road)		✔	✔	✔	✔
Southampton	A33 Western Approach / Redbridge Rd / Millbrook Rd West	Reduction in speed limit from 50mph to 40mph	✔	✔	✔	✔	✔
Southampton	A3024 improvements	Upgrade to various junctions between Botley Road and A334 Bitterne Road East as proposed in HE's M27 Soton Junctions consultation by providing new traffic signal technology and pedestrian crossing facilities, along with a segregated cycle freeway along Bursledon Road and bus priority		✔	✔	✔	✔
Southampton	M27 J8	Capacity enhancement scheme		✔	✔	✔	✔
Southampton	Windhover Roundabout	Capacity enhancement scheme		✔	✔	✔	✔
Southampton	Woolston - Victoria Rd / Woodley Rd	Changes to Victoria Rd to one way southbound. This scheme also involved making Woodley Rd one way northbound and changes to Victoria Rd/Portsmouth Rd/ Bridge Rd crossroads	✔	✔	✔	✔	✔
Southampton	Swaythling A335 Junctions scheme	Improved signals at 4x junctions in Swaythling on A335/ A35	✔	✔	✔	✔	✔
Southampton	Woolston Itchen Riverside development	hanges to network in Woolston development area- in addition to Victoria Rd/ Woodley Rd (above). Downgrade/ restrictions to Victoria Road and new John Thornycroft Rd/ Vosper Rd/ Oswald Rd becoming main through route. Includes 2x new roundabouts	✔	✔	✔	✔	✔
Southampton	Wide Lane	New traffic signal controlled junction for Mountpark Access	✔	✔	✔	✔	✔
Southampton	Inner Avenue Southbound	Removal of nearside lane on Inner Avenue SB between Lodge Road and Dorset St to provide new segrargated cycle lane, also new segregated cycle lane on northbound side (no lane changes, but some kerbing/lane width alterations)	✔	✔	✔	✔	✔
Southampton	A33 Millbrook Roundabout	New signal timings/ MOVA following reconstruction scheme	✔	✔	✔	✔	✔
Southampton	A33 Millbrook Road West/Regents Park Road	Adjustments to traffic signal timings/ minor changes to junction layout	✔	✔	✔	✔	✔
Southampton	A3057 Shirley High Street/Park Street	Adjustments to bus lane and traffic signal timings	✔	✔	✔	✔	✔
Southampton	Brownhill Way/Frogmore Lane	Adjustmetnts to traffic signal timings and pedestrian crossing	✔	✔	✔	✔	✔
Southampton	Third Avenue	New two way segregated cycle route creating all traffic one way route eastbound	✔	✔	✔	✔	✔
Southampton	Northam Road/Union Street/Princes Street	Adjustments to layout & signal timings	✔	✔	✔	✔	✔
Southampton	Saltmarsh Lane/ Central Bridge/ Albert Rd North/ Itchen Brdge	Adjusted signal timings	✔	✔	✔	✔	✔
Southampton	A33 West Quay Road corridor	Adjustment to traffic signal timings from Southern Road to Grand Harbour Parade	✔	✔	✔	✔	✔
Southampton	The Avenue cycleway Alma Rd-Avenue Rd	Reduction to one lane southbound between Alma Rd and Avenue Rd		✔	✔	✔	✔
Southampton	Stoneham Way/ Wide Lane junction	Signal and cycle improvements		✔	✔	✔	✔
Southampton	Thornhill Park Road/Hinkler Road	New signals/MOVA following renovation		✔	✔	✔	✔
Southampton	A33 West Quay Road/Leisure World	Changes to access to Leisure World site including new signals, ped-cycle crossings, additional left turn lane into site, removal of ped crossing across West Quay Road		✔	✔	✔	✔
Southampton	A33 West Quay Road/Harbour Parade North	New signal controller and changes pedestrian crossing of West Quay Road (new 10m wide crossing no stagger straight across)		✔	✔	✔	✔
Southampton	Winchester Road/Dale Road	Changes to signals and lane redistribution to incorporate cycle lane		✔	✔	✔	✔
Southampton	St Mary's Road	Changes to St Mary's Road/Charlotte Place link road signals to incorporate cycle bypass lights		✔	✔	✔	✔
Southampton	Dorset Street	Infill of subway at Rockstone Lane to new at grade toucan crossing	✔	✔	✔	✔	✔
Southampton	Queensway	New entrance to Bargate Centre redevelopment, changes to The Strand (no long through route from Queensway roundabout), replacement of toucan crossing with parallel cycle-ped zebra.		✔	✔	✔	✔
Test Valley	M27 J3	W/B off-slip and corresponding circulating lane flared to 3 lanes, M271 S/B approach flared to 3 lanes, M271 N/B flare lengthened	✔	✔	✔	✔	✔
Test Valley	M271 Junction 1 / Brownhill Way	Signalisation of M271 Junction 1, additional carriageway on Brownhill Way to Adanac rbt	✔	✔	✔	✔	✔
Test Valley	Romsey Waitrose /Alma Rd mini roundabout	Additional lane on Waitrose entry arm		✔	✔	✔	✔
Test Valley	Romsey town centre shared space	Church Street, Bell Street, Market Place- public realm/shared space scheme	✔	✔	✔	✔	✔
Test Valley	Abbotswood network changes	New road links serving Abbotswood development- changes to Braishfield Rd (site access rbt) and Braishfield Rd/ Jermyns Ln/ Sandy Ln roundabout (crossroads replaced with roundabout)	✔	✔	✔	✔	✔

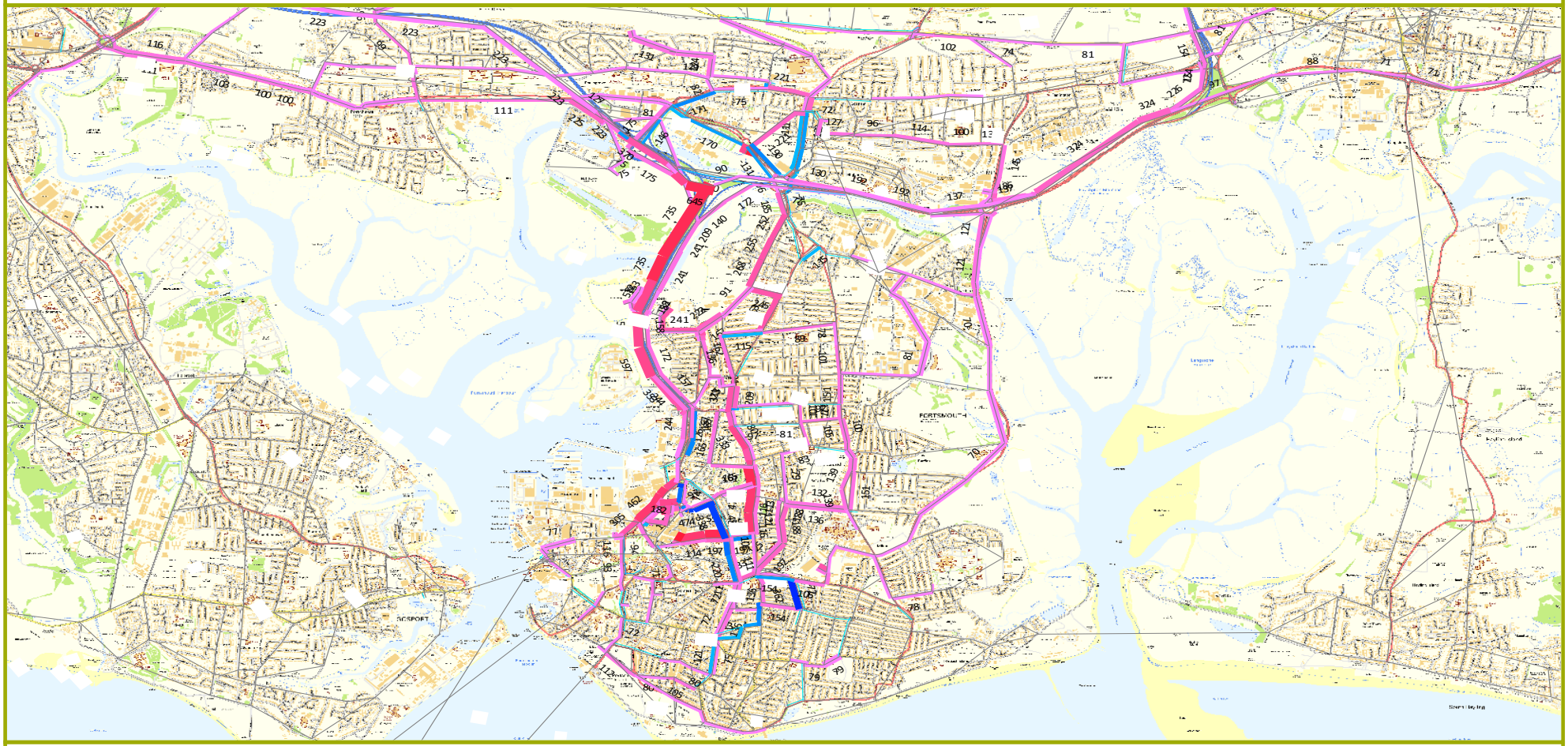
Test Valley	Redbridge Lane/ Romsey Rd/ Bakers Drove improvement	Junction improvement		☒	☒	☒	☒
Test Valley	Winchester Road/Braishfield Road, Romsey	Conversion of T junction to new 3 arm signal junction	✓	✓	✓	✓	✓
New Forest	Ringwood Rd/Calmore Road, Totton	New ped stage added; MOVA control introduced	✓	✓	✓	✓	✓
New Forest	Rollestone cross roads, Blackfield	MOVA control introduced	✓	✓	✓	✓	✓
New Forest	A326 roundabout/ junction improvements	Improvements to eight A326 junctions between Blackfield and Dibden		✓	✓	✓	✓
Winchester	Andover Road/Southern Access Road (Barton Farm development), Winchester	New 3 arm signal junction	✓	✓	✓	✓	✓
Winchester	Andover Road/Northern Access Road, Winchester	New 3 arm signal junction	✓	✓	✓	✓	✓
Winchester	Romsey Rd/Pitt Manor, Winchester	New 3 arm signal junction	✓	✓	✓	✓	✓
Winchester	Pitt Park + Ride site,Winchester	200 Space Park + Ride site	✓	✓	✓	✓	✓
WInchester	Vaultex Park & Ride site, Winchester	New multi-storey car park (P&R) with 287 spaces accessed off Barfield Close		✓	✓	✓	✓
Winchester	New Andover Road	Closure of existing Andover Road to through traffic with traffic being diverted through Kings Barton development spine road. Major junction enhancements at either end of route		✓	✓	✓	✓
Winchester	Bar End Road roundabout	New enlarged roundabout to provide access to new Leisure Centre		✓	✓	✓	✓
Wickham (Winchester)	A334 Fareham Rd/ Hoads Hill/ A32 School Ln roundabout additional arm	New 4th arm added, togetehr with changes (ped crossing islands and changes to location of splitter islands) on other three arms		✓	✓	✓	✓
Smart Motorways	Smart Motorways - M3	Smart motorway M3 J9 to 14		☒	☒	☒	☒

NOT CONSIDERED COMMITTED

Southampton	Northam Rail Bridge	Replacement of existing rail bridge with new, wider bridge/ bridges to remove bottleneck					
Eastleigh	Hamble Lane northern improvements	Widening, junction improvements at northern end of Hamble Lane (Portsmouth Road to Windhover Rbt) to tie in with Windhover improvements					
Eastleigh	Wide Lane rail bridge replacement	Replacement of current Wide Lane rail bridge with potentially enhanced (wider) new bridge					
Eastleigh	Romsey Road/Twyford Road/Coles Close (Lidl)/Bishopstoke Road/Station Hill Roundabout	Major remodelling of roundabout/ junctions in this area					
Eastleigh	North Bishopstoke Bypass						
Eastleigh	South Bishopstoke Bypass						
Welborne	M27 J10 West facing slips	M27 J10 upgrade to all moves as part of Welborne development		✓	✓	✓	✓
Welborne	Internal Welborne Network	New road network and conections to exisiting network for Welborne major development.		✓	✓	✓	✓
Winchester	M3J9 grade separation	Major remodelling of M3J9 to allow free-flow moves between A34 and M3					
Portsmouth	City Centre Road	Realignment of A3 Hope Street/Commercial Rd north of city centre to enable major development scheme					
Southampton	M271 Redbridge roundabout	Not listed above - scheme completed December 2020	✓	✓	✓	✓	✓

Appendix D - SRTM 2041 Baseline vs 2041 Do Minimum Plots

Portsmouth Local Plan Plots - 2041 - AM Peak Do Minimum vs Baseline Highway Flow Difference - Wider View



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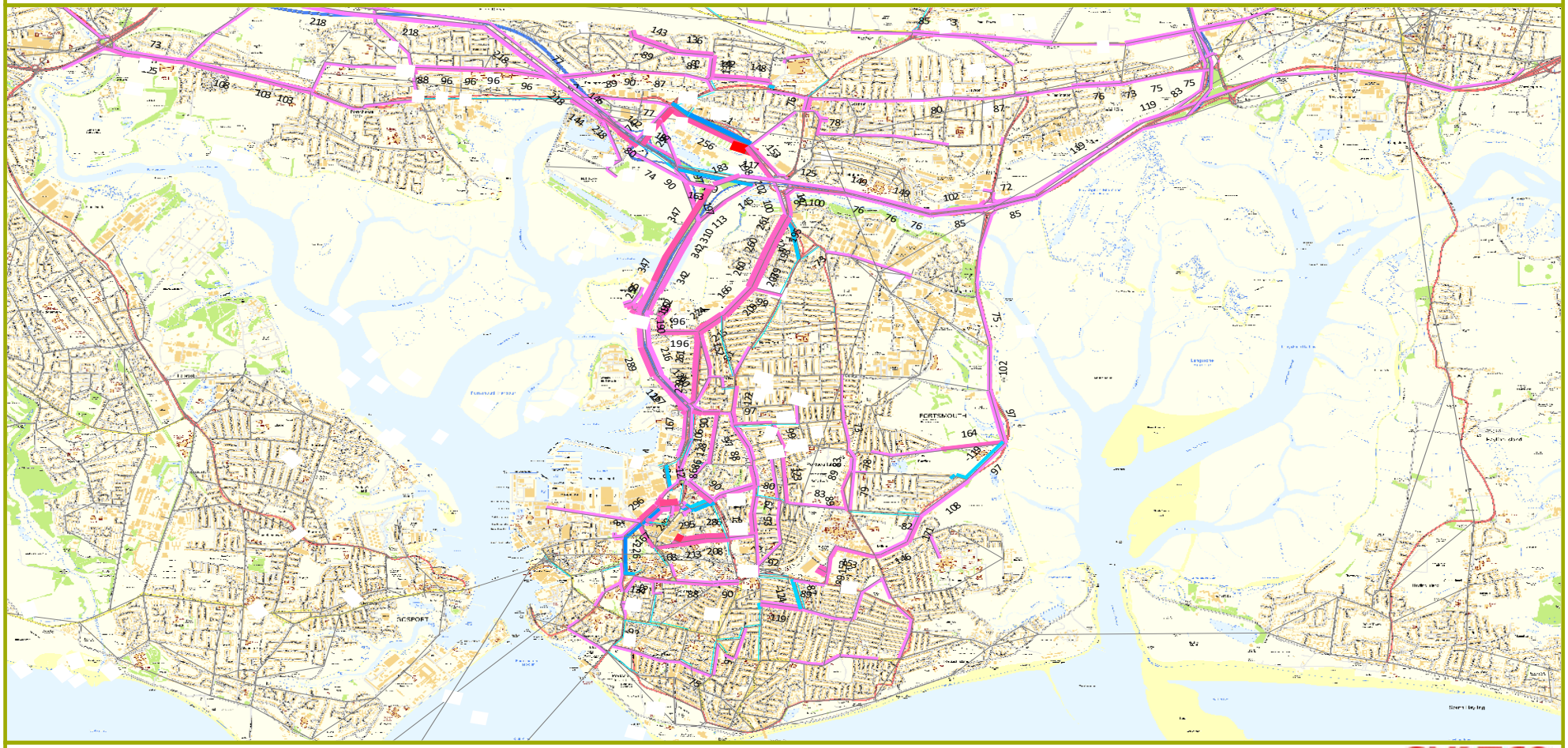
SYSTRA

Portsmouth Local Plan Plots - 2041 - PM Peak Do Minimum vs Baseline Highway Flow Difference - Wider View



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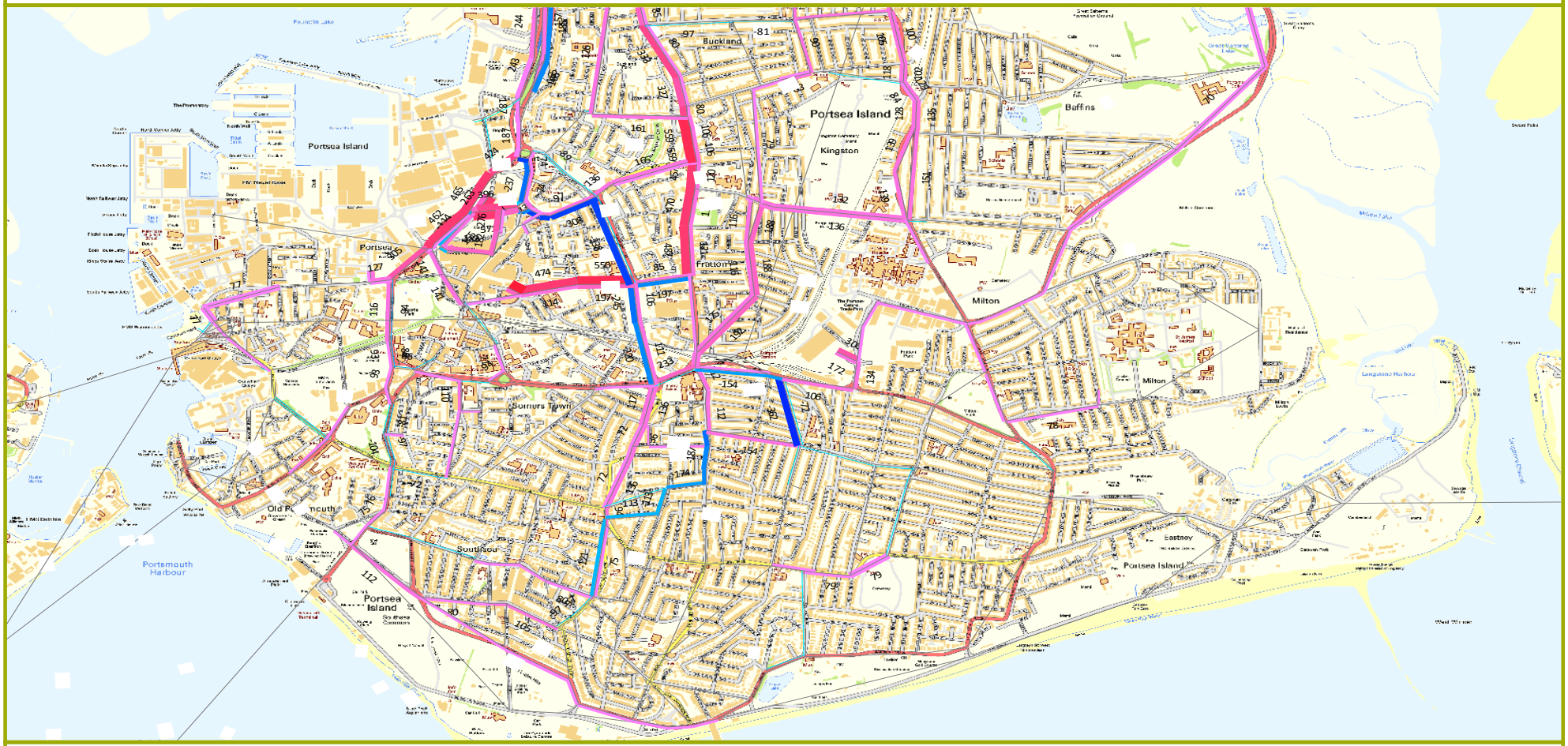
SYSTRA

Portsmouth Local Plan Plots - 2041 - AM Peak Do Minimum vs Baseline Highway Flow Difference - Portsmouth Southern Area



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Portsmouth Local Plan Plots - 2041 - PM Peak Do Minimum vs Baseline Highway Flow Difference - Portsmouth Southern Area

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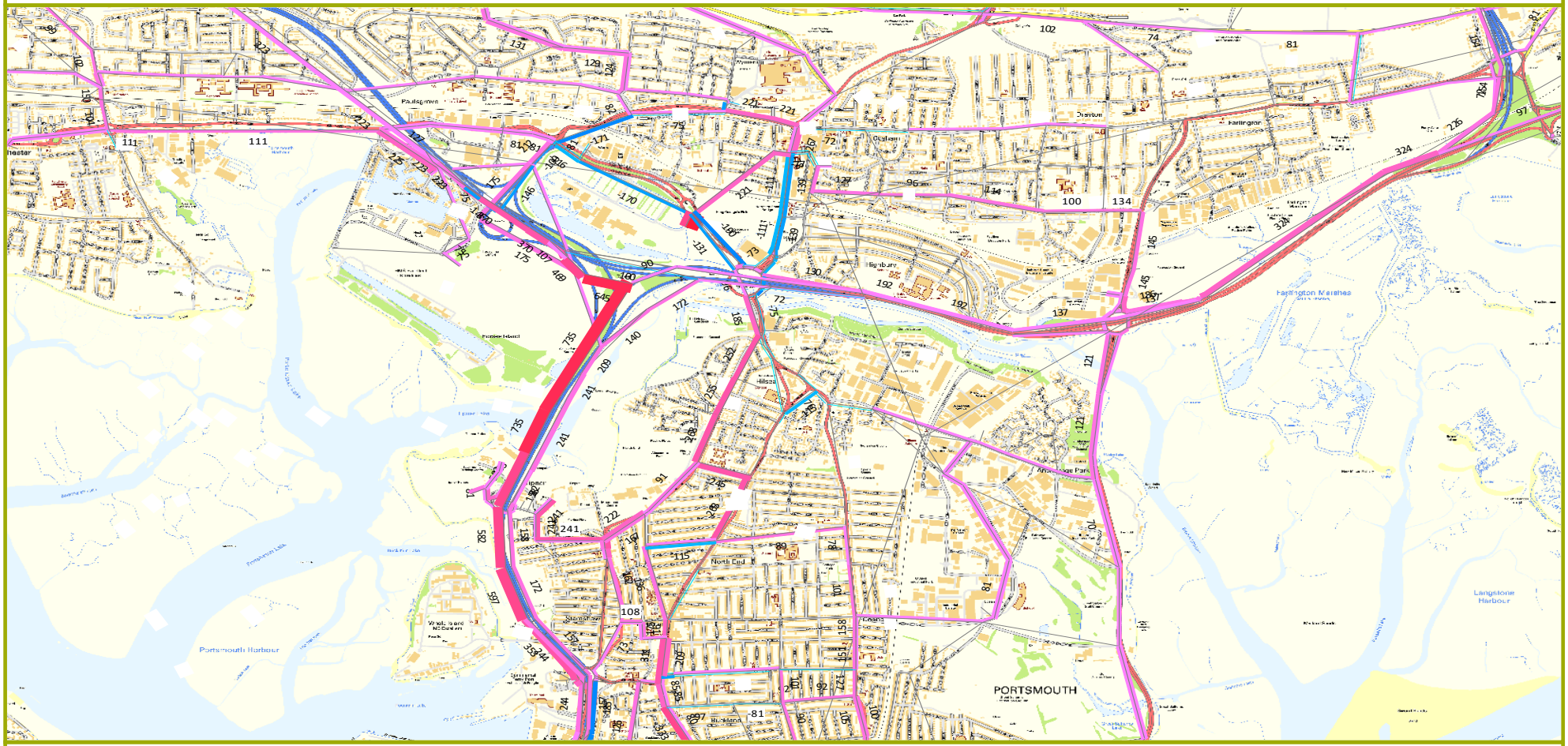
SYSTRA

Portsmouth Local Plan Plots - 2041 - AM Peak Do Minimum vs Baseline Highway Flow Difference - Portsmouth Northern Area



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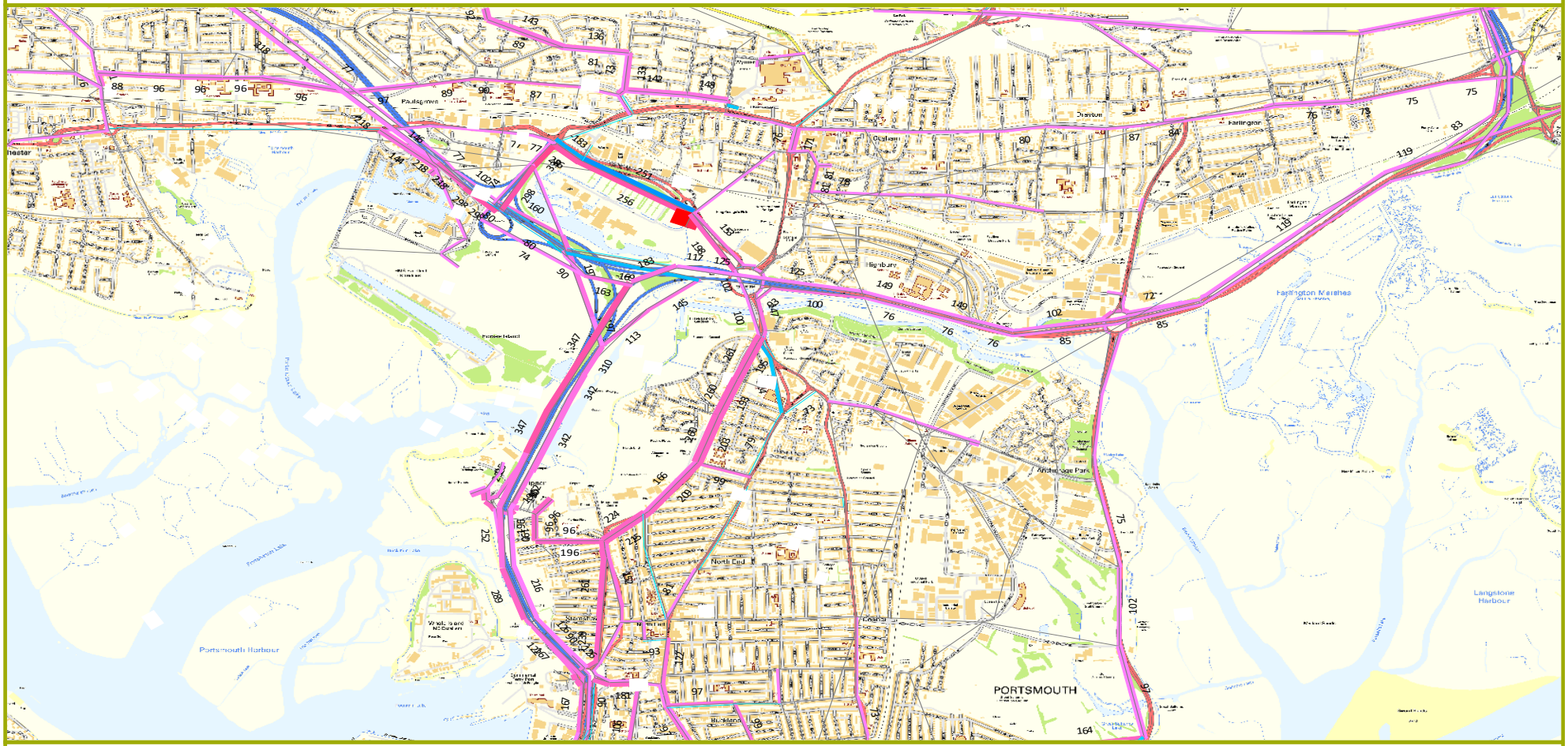
Portsmouth Local Plan Plots - 2041 - PM Peak Do Minimum vs Baseline Highway Flow Difference - Portsmouth Northern Area



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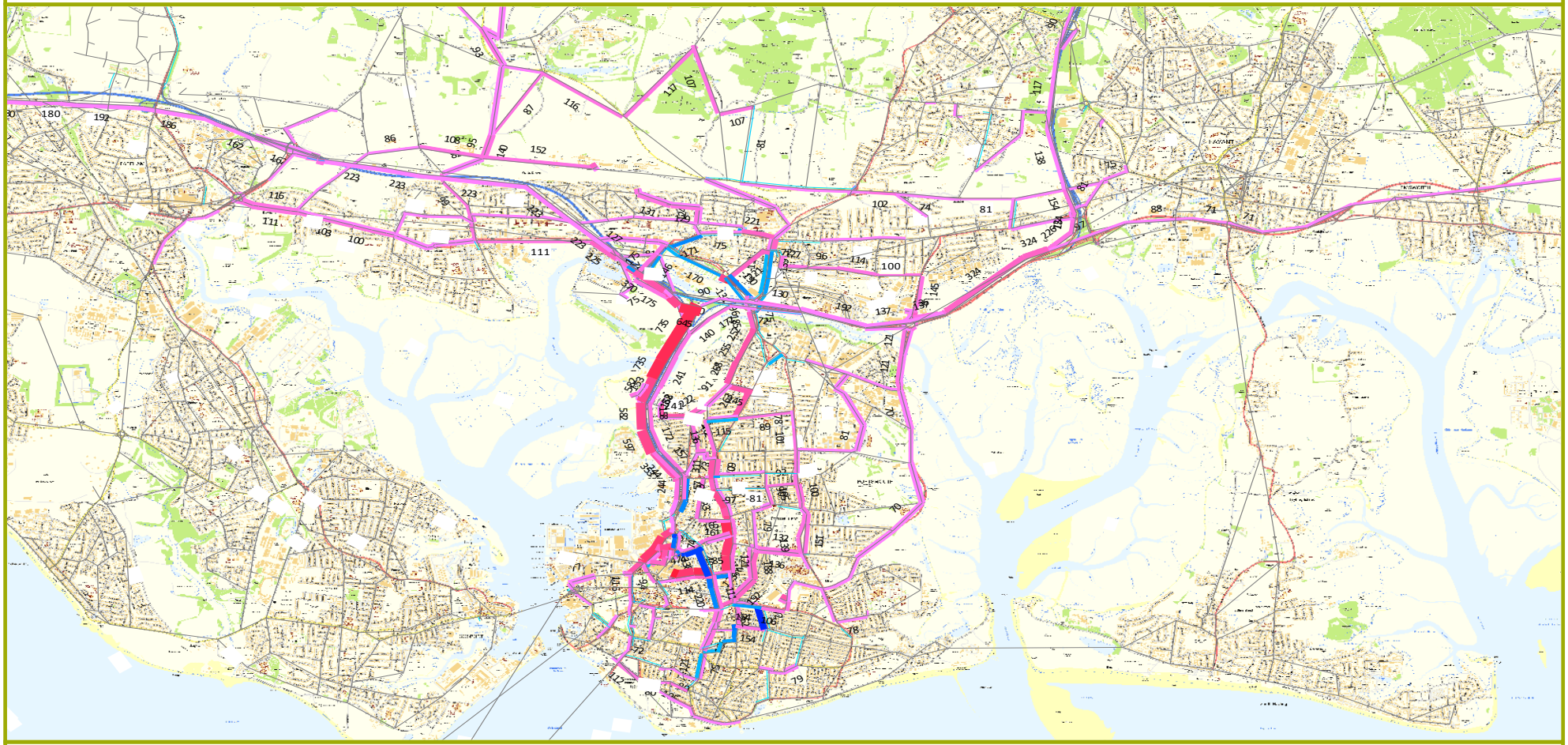
Portsmouth Local Plan Plots - 2041 - AM Peak Do Minimum vs Baseline Highway Flow Difference - Strategic View



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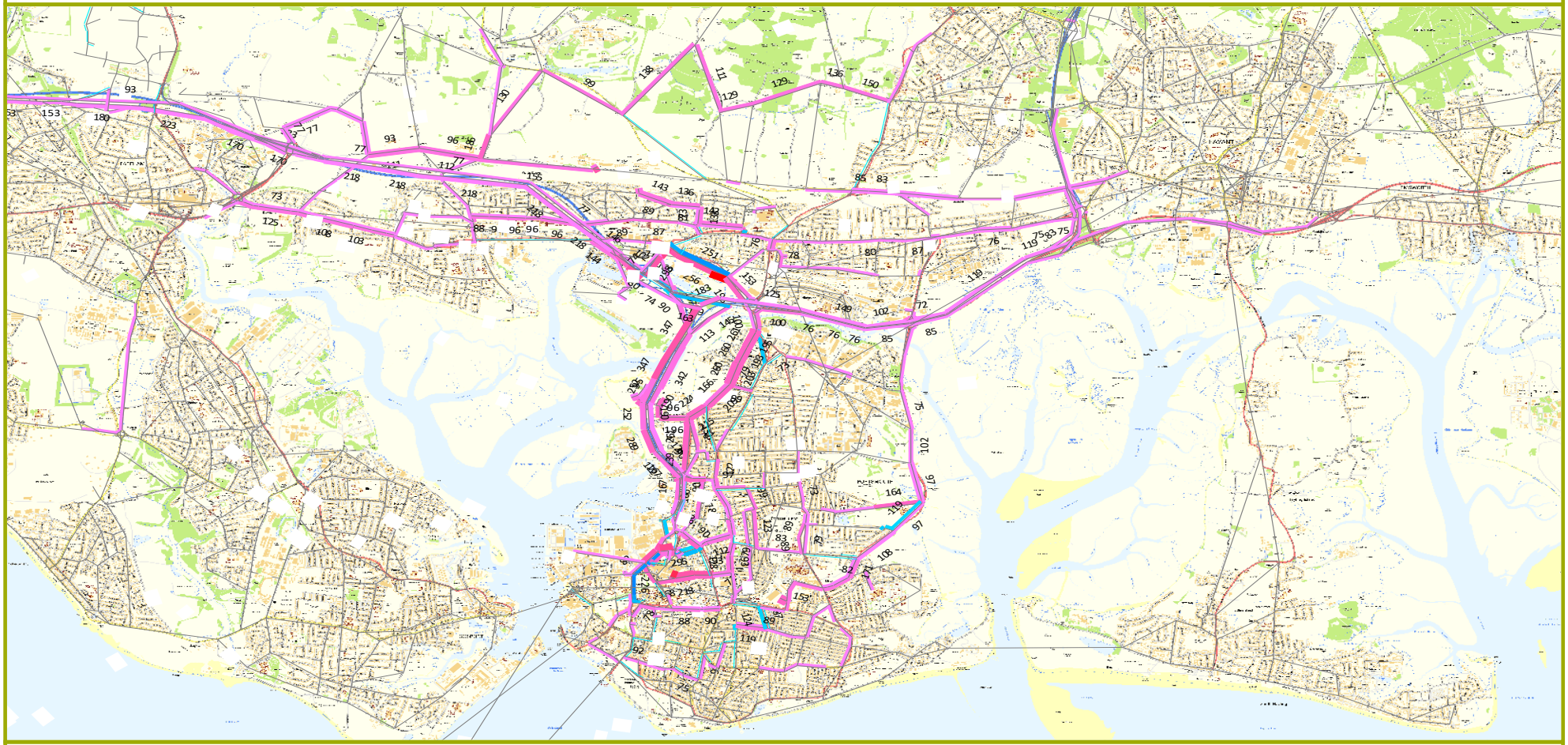
Portsmouth Local Plan Plots - 2041 - PM Peak Do Minimum vs Baseline Highway Flow Difference - Strategic View



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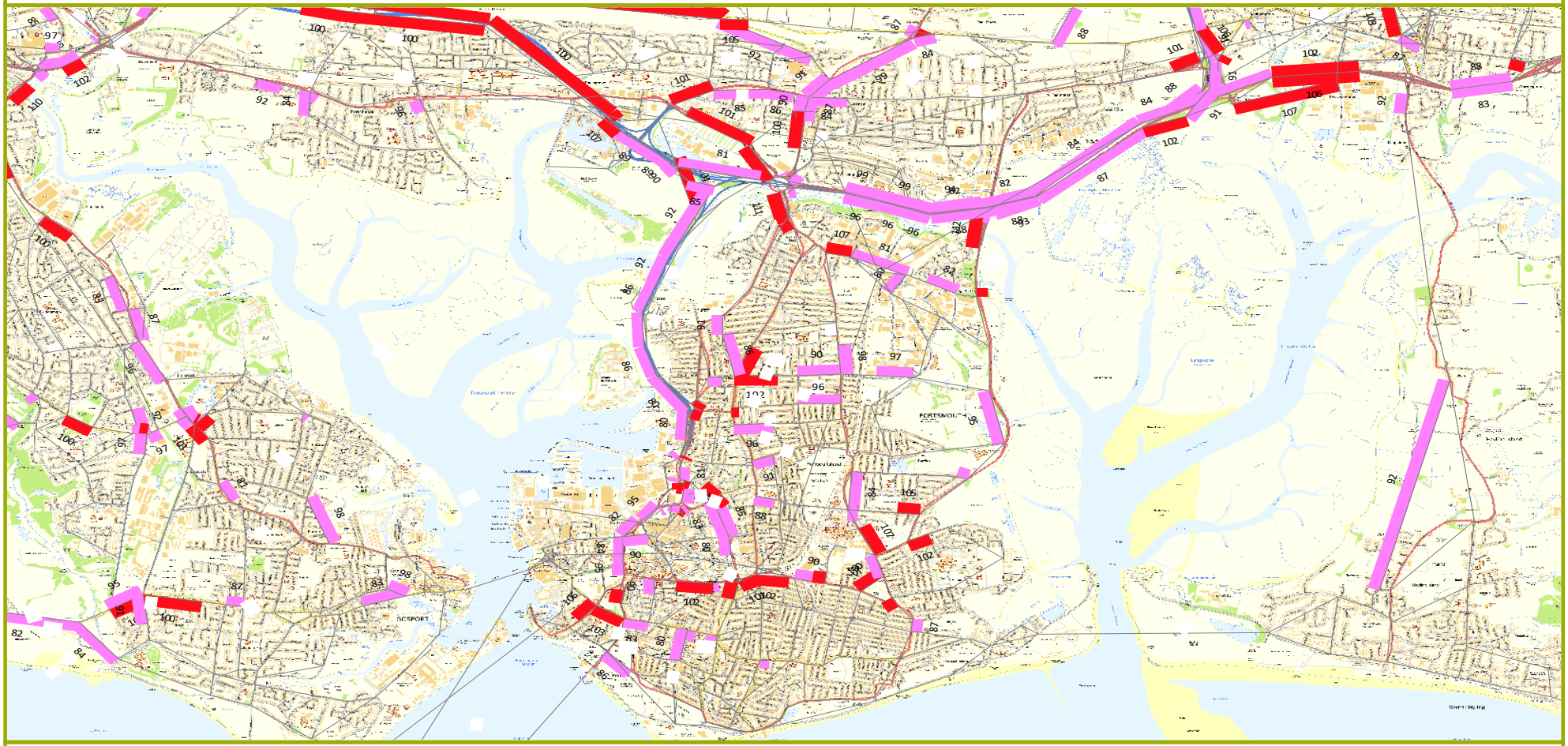
SYSTRA

Portsmouth Local Plan Plots - 2041 - AM Peak Baseline V/C - Wider View



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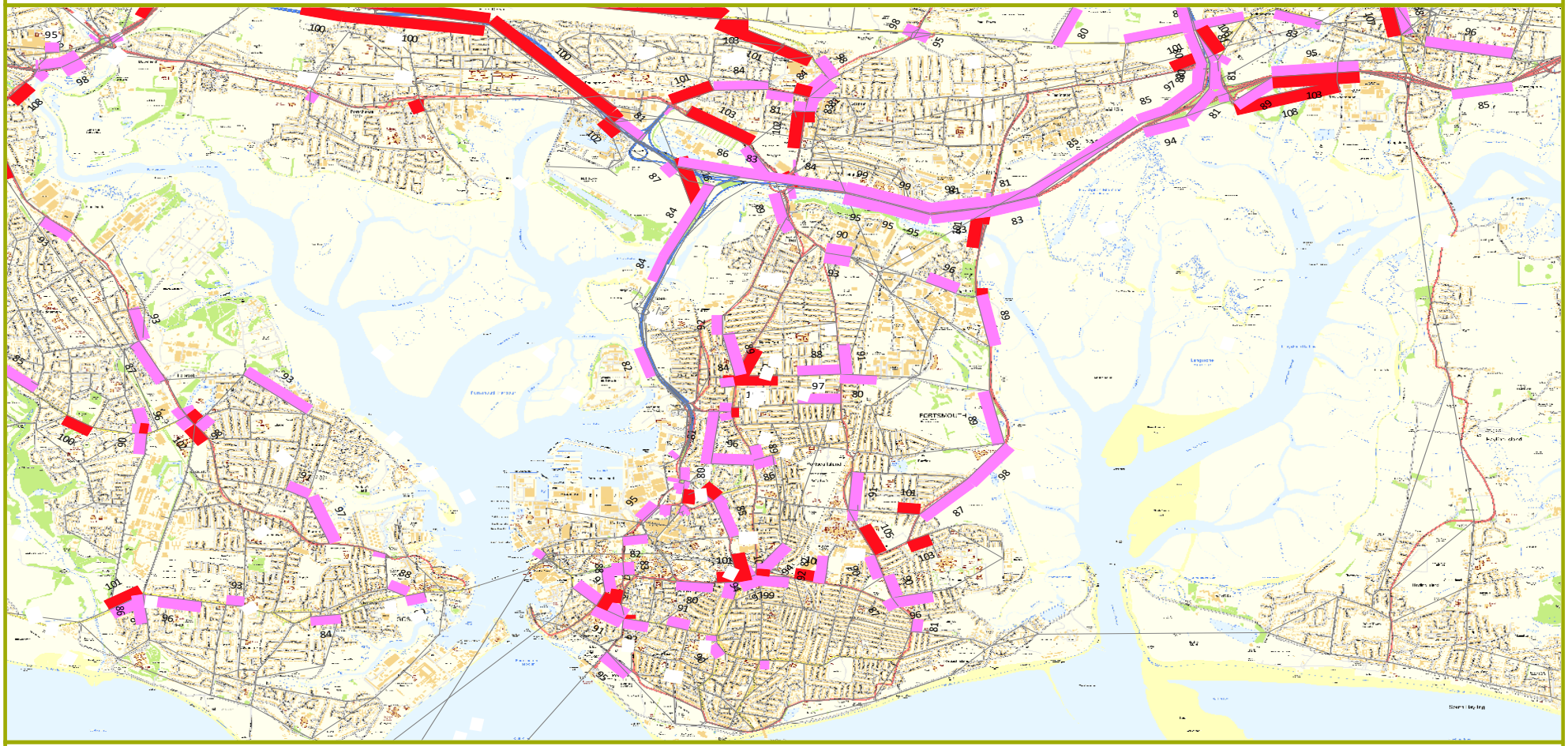
Portsmouth Local Plan Plots - 2041 - PM Peak Baseline V/C - Wider View



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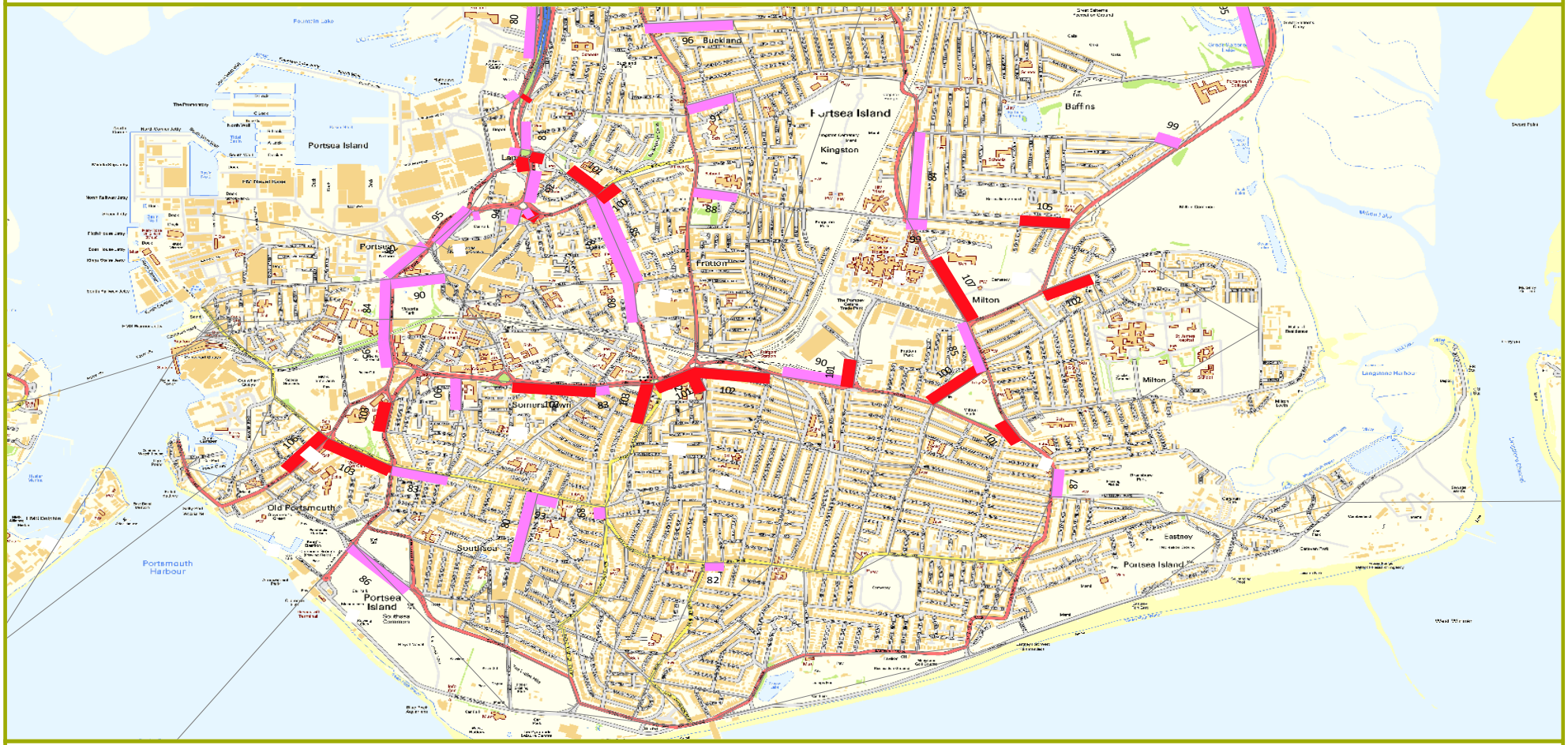
SYSTRA

Portsmouth Local Plan Plots - 2041 - AM Peak Baseline V/C - Portsmouth Southern Area



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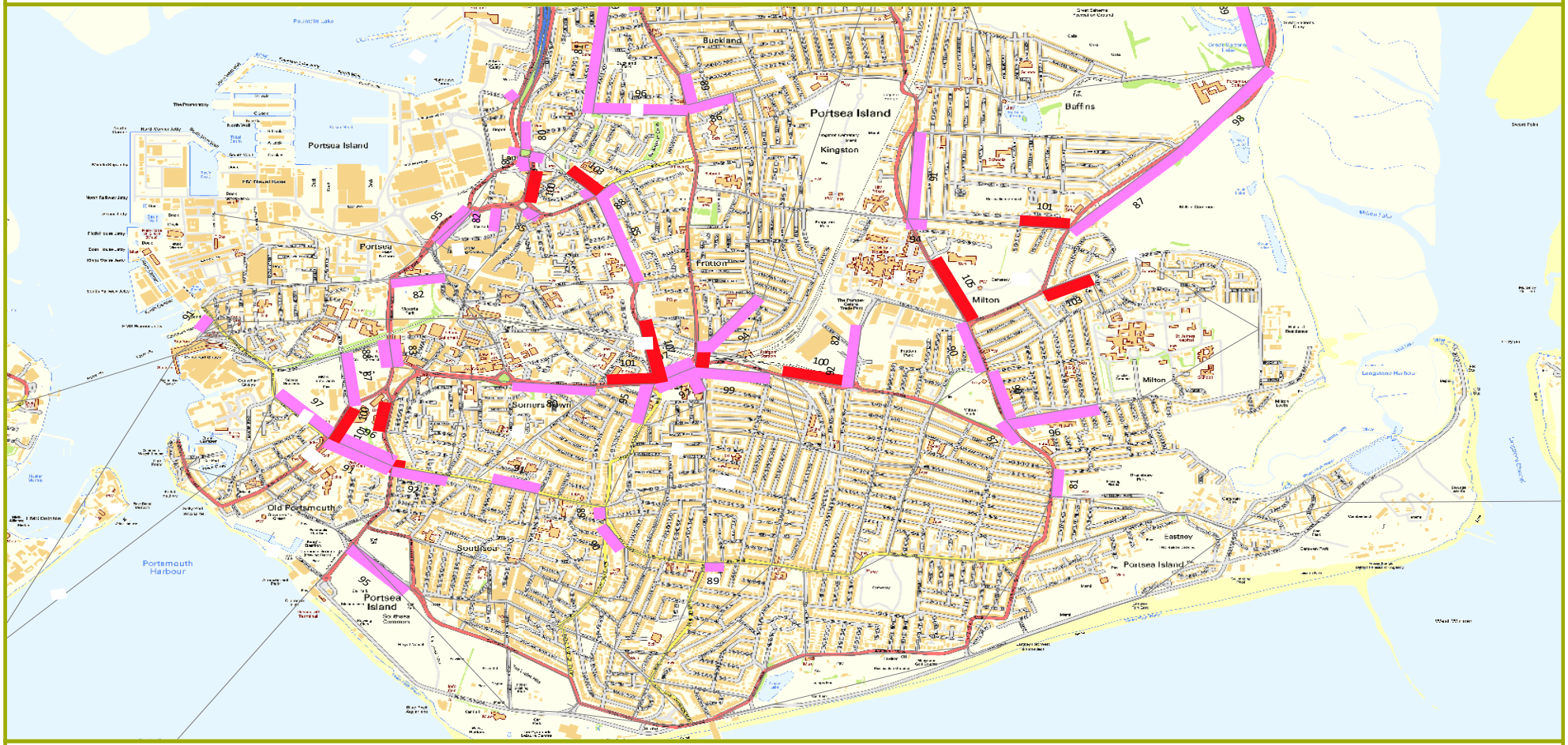
Portsmouth Local Plan Plots - 2041 - PM Peak Baseline V/C - Portsmouth Southern Area



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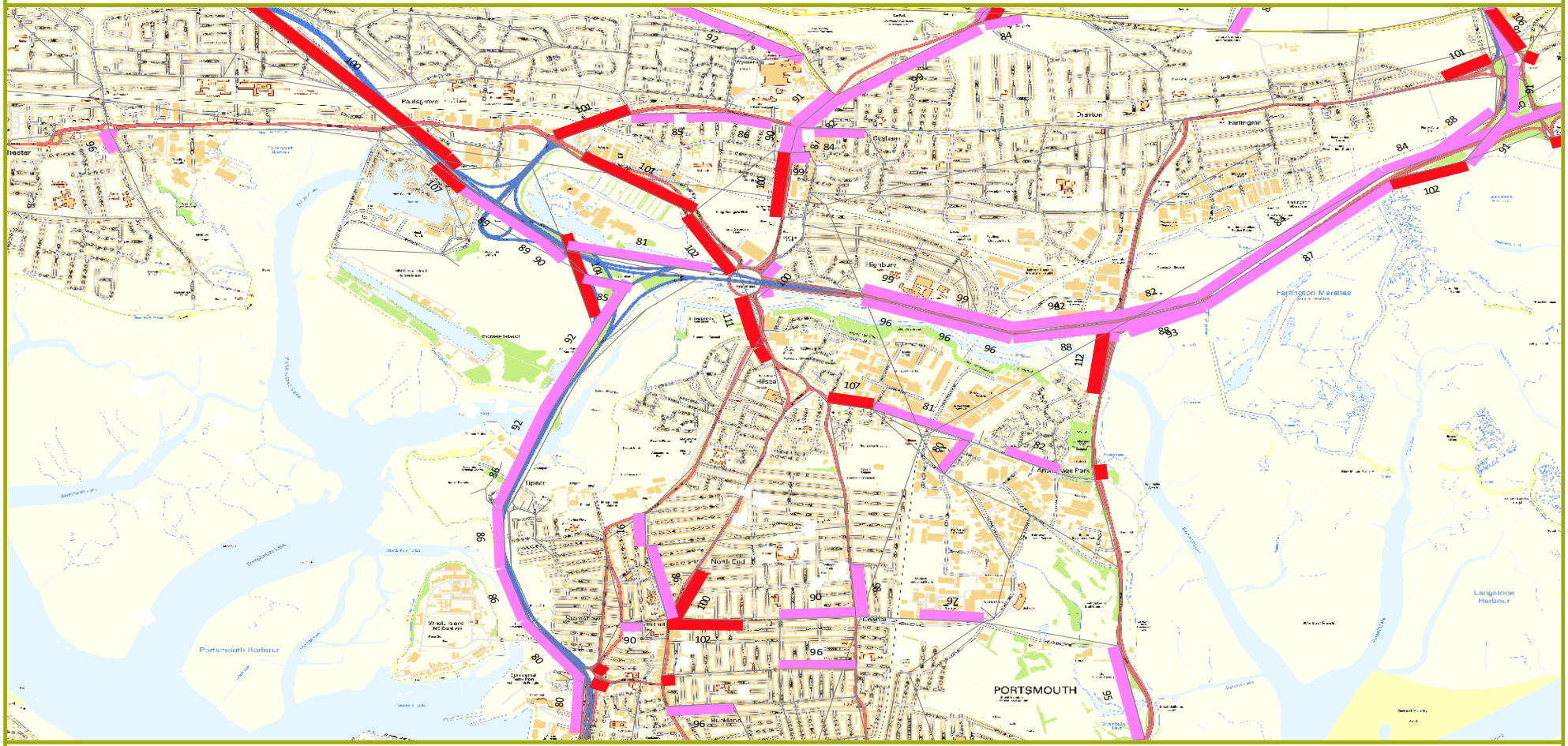
Portsmouth Local Plan Plots - 2041 - AM Peak Baseline V/C - Portsmouth Northern Area



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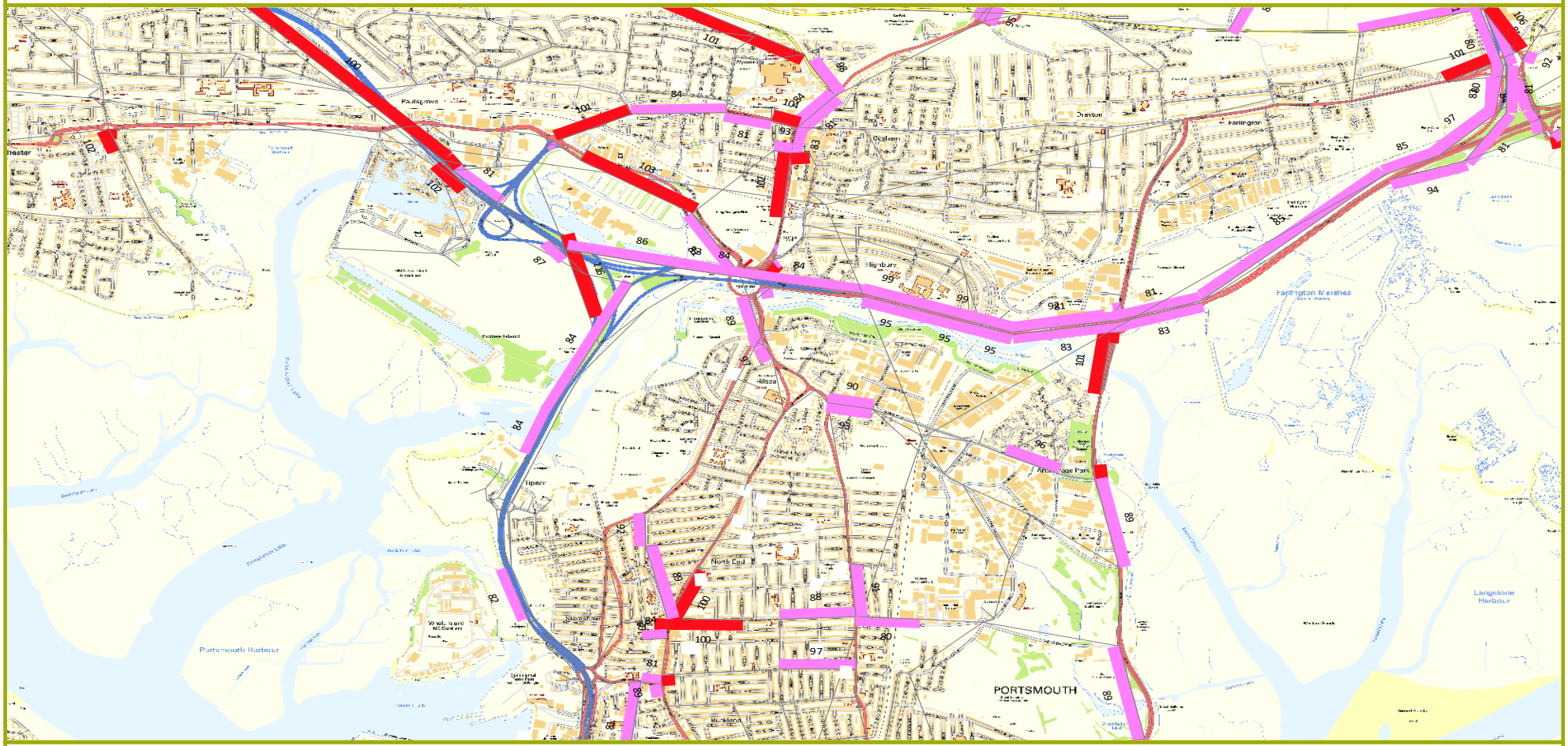
Portsmouth Local Plan Plots - 2041 - PM Peak Baseline V/C - Portsmouth Northern Area



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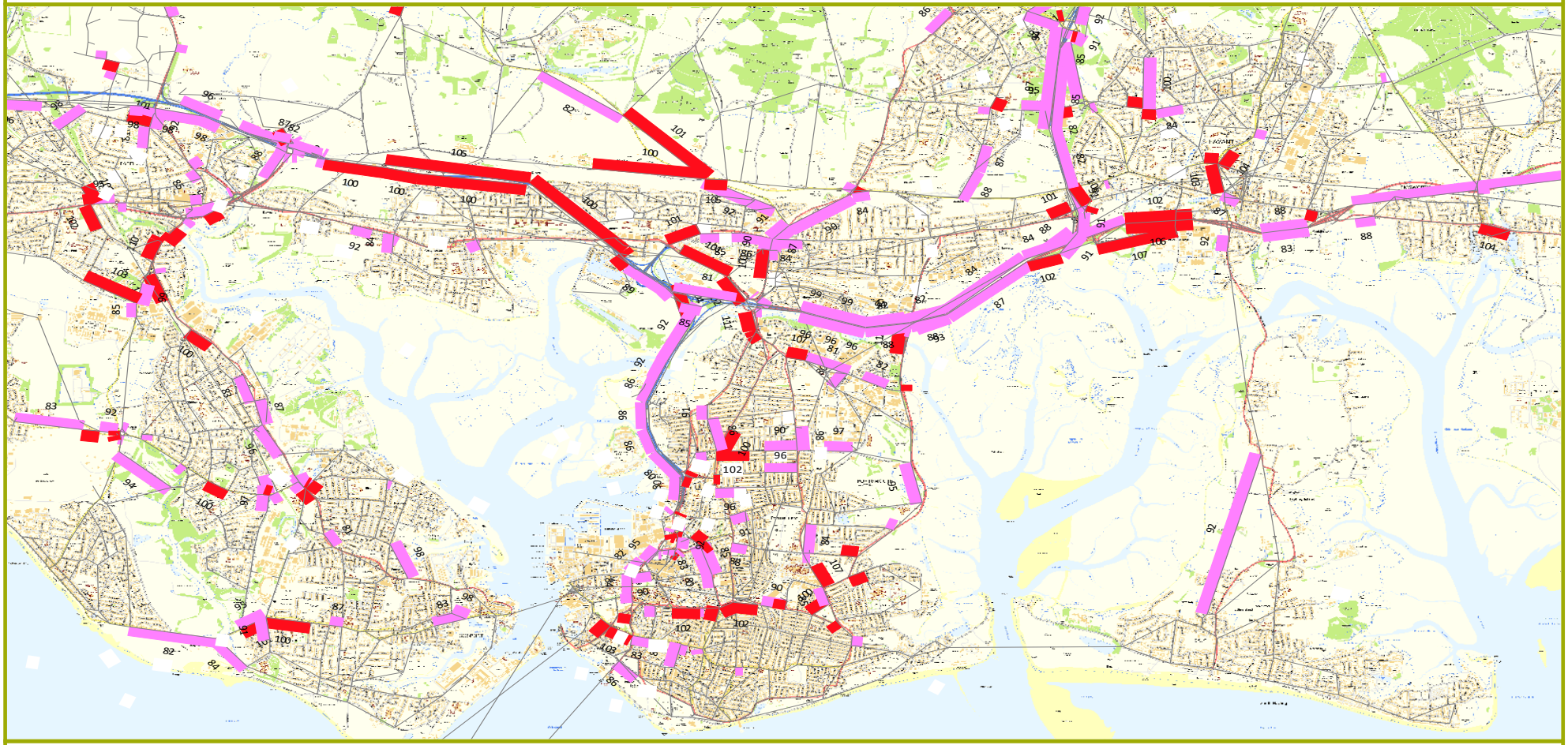
SYSTRA

Portsmouth Local Plan Plots - 2041 - AM Peak Baseline V/C - Strategic View



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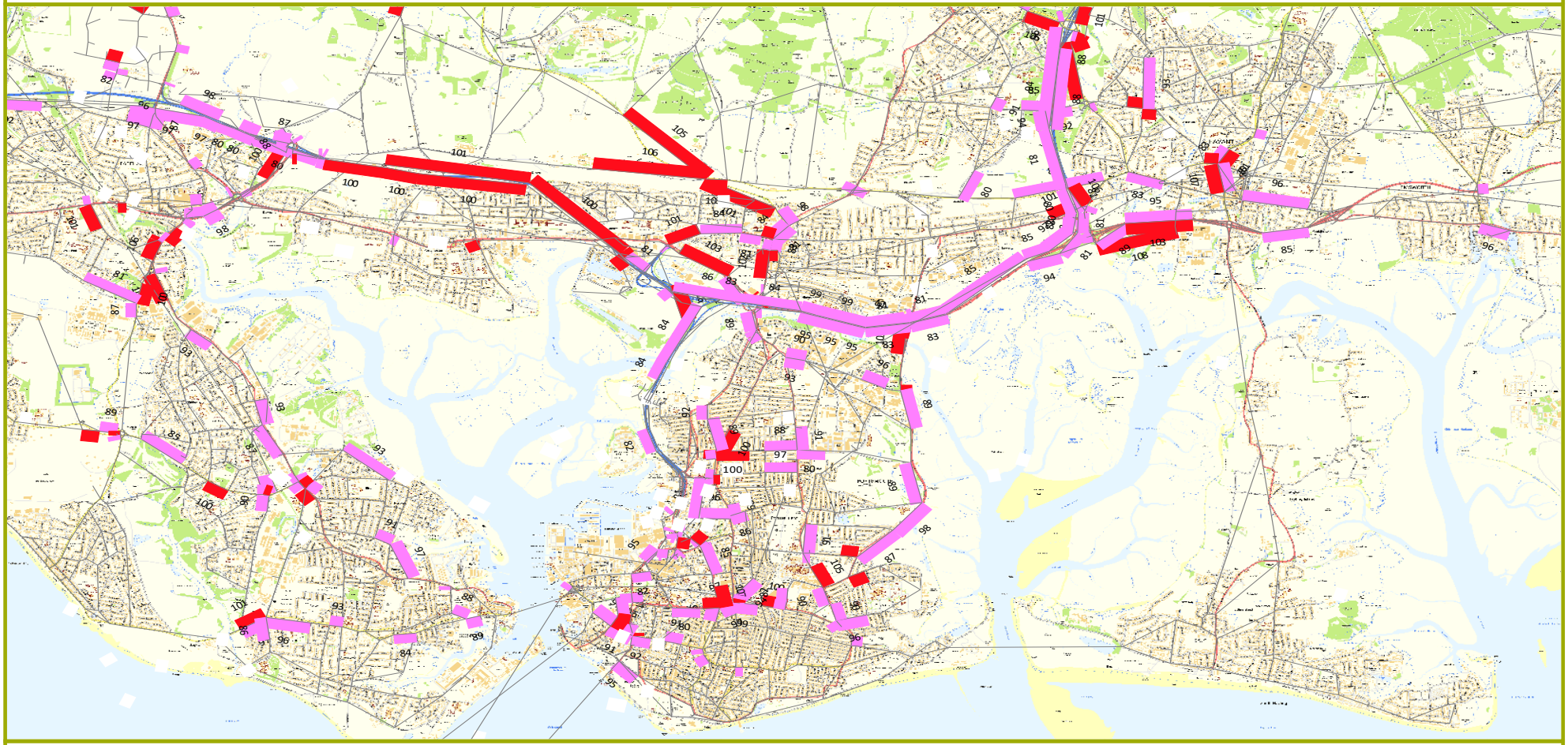
SYSTRA

Portsmouth Local Plan Plots - 2041 - PM Peak Baseline V/C - Strategic View



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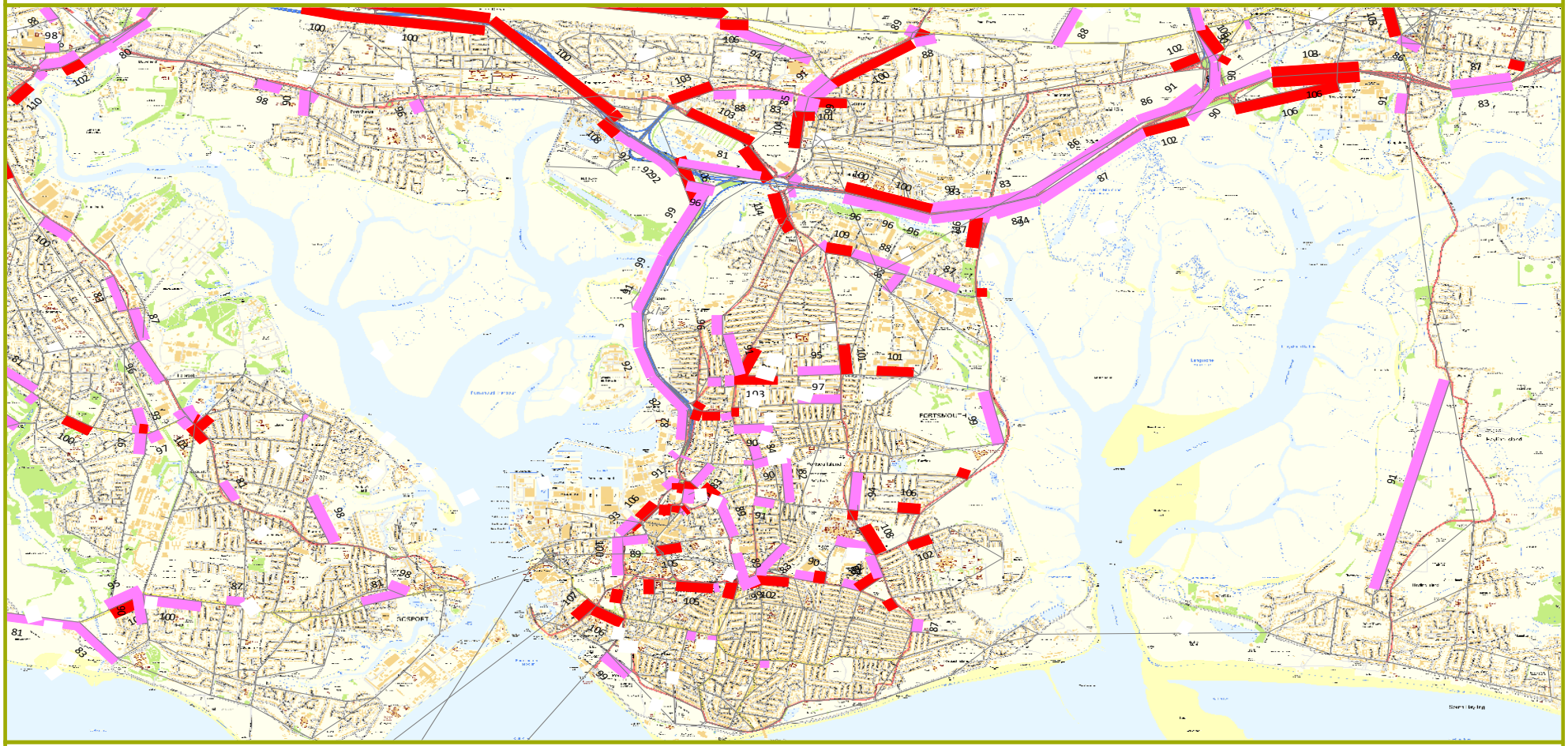
Portsmouth Local Plan Plots - 2041 - AM Peak Do Minimum V/C - Wider View



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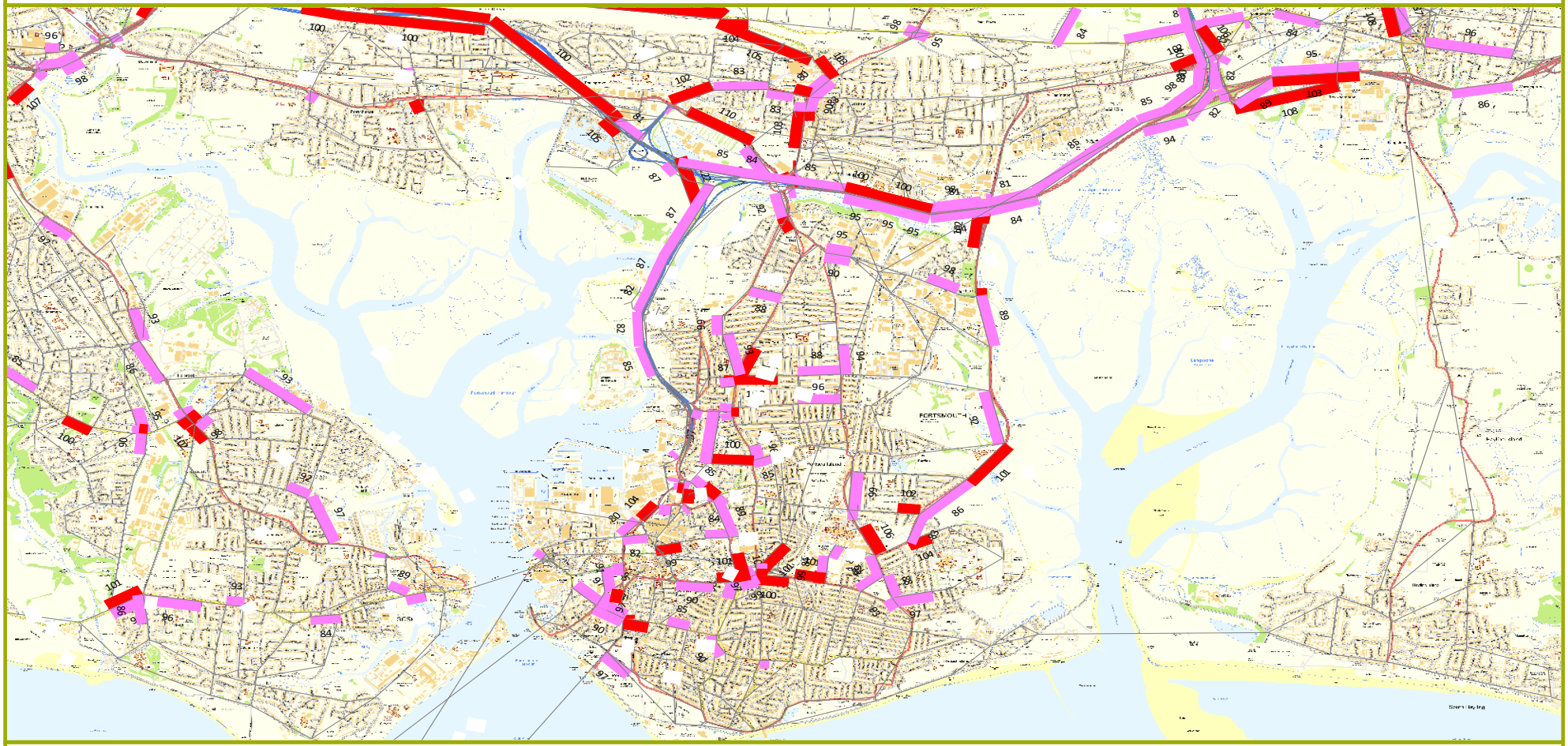
Portsmouth Local Plan Plots - 2041 - PM Peak Do Minimum V/C - Wider View



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Portsmouth Local Plan Plots - 2041 - AM Peak Do Minimum V/C - Portsmouth Southern Area

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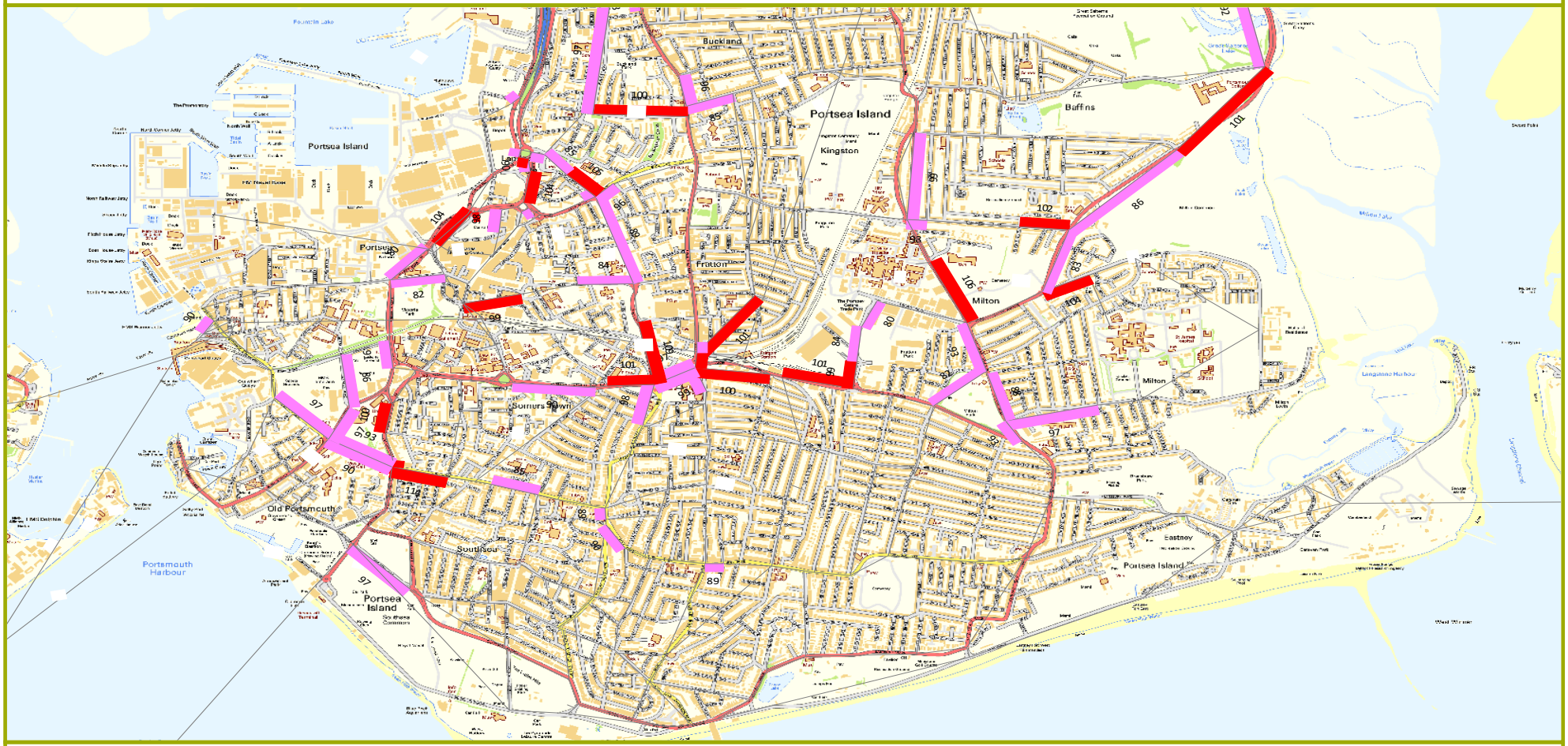
Portsmouth Local Plan Plots - 2041 - PM Peak Do Minimum V/C - Portsmouth Southern Area



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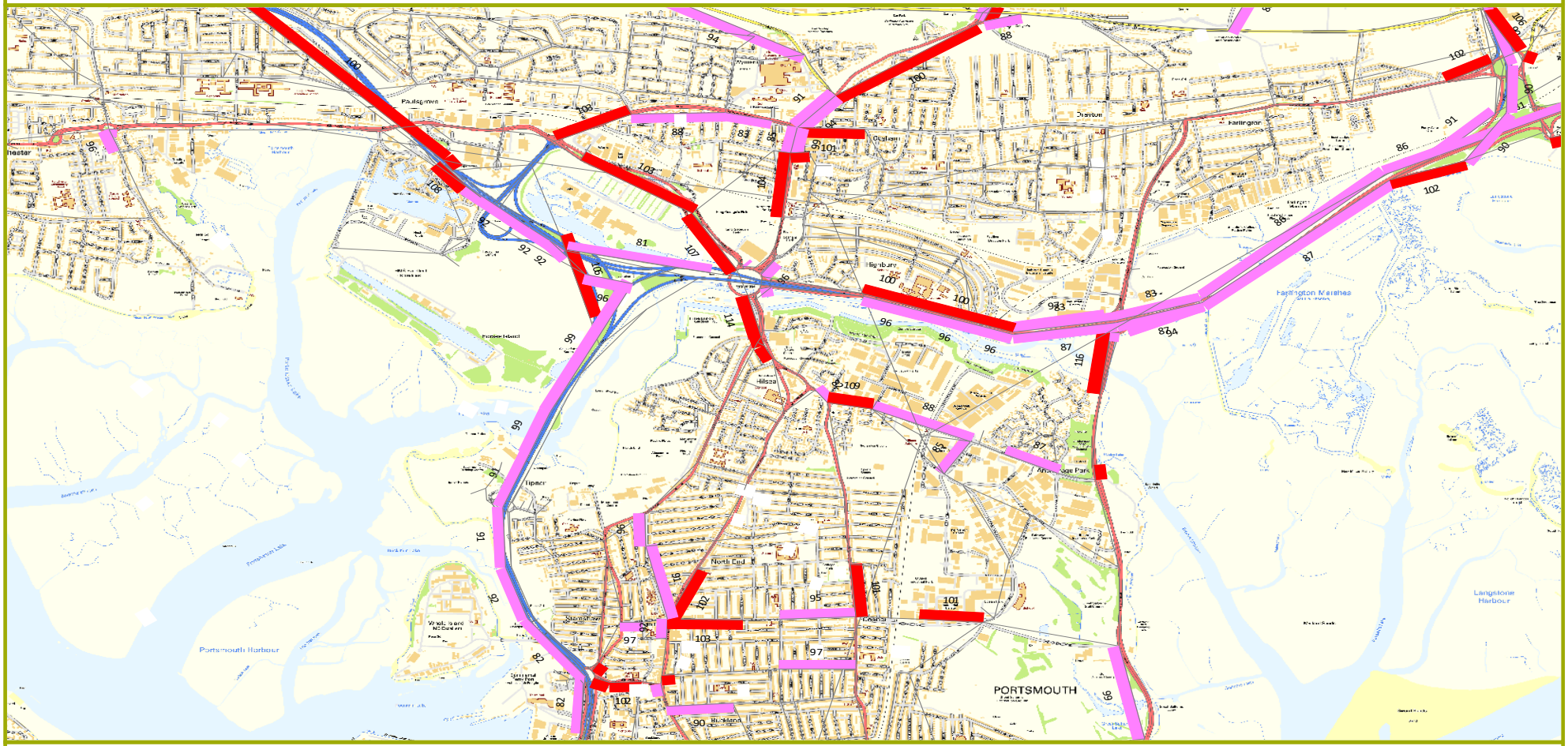
SYSTRA

Portsmouth Local Plan Plots - 2041 - AM Peak Do Minimum V/C - Portsmouth Northern Area



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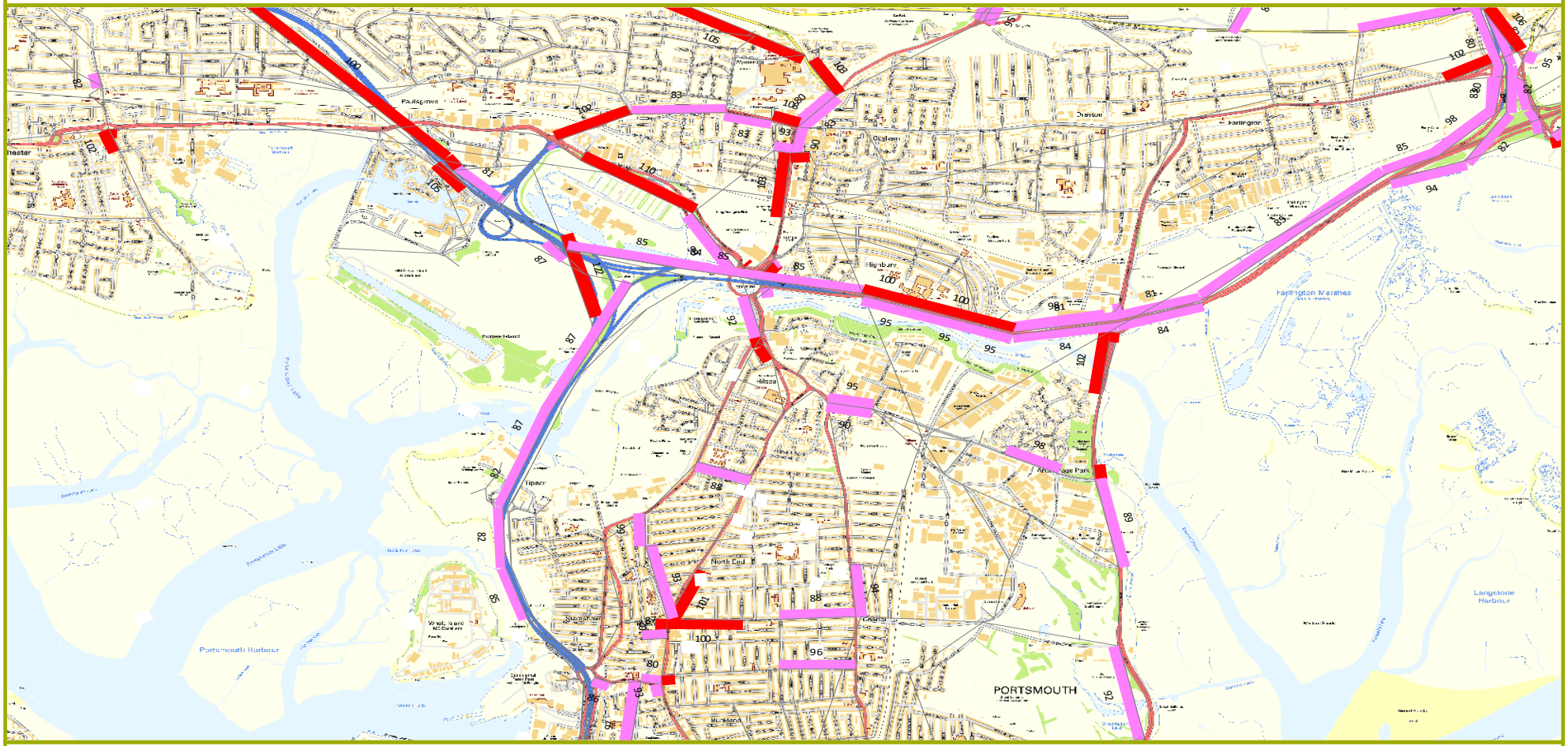
Portsmouth Local Plan Plots - 2041 - PM Peak Do Minimum V/C - Portsmouth Northern Area



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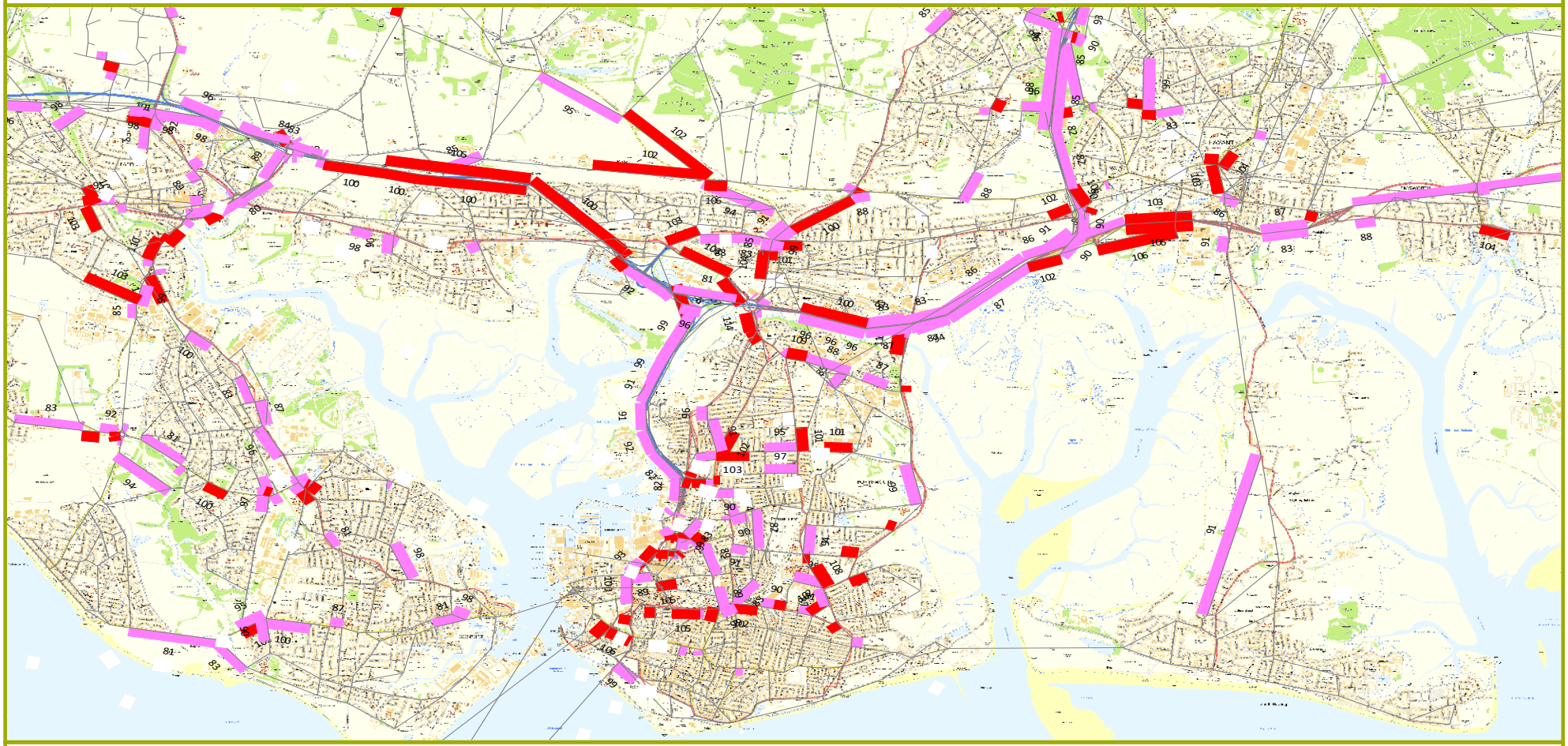
Portsmouth Local Plan Plots - 2041 - AM Peak Do Minimum V/C - Strategic View



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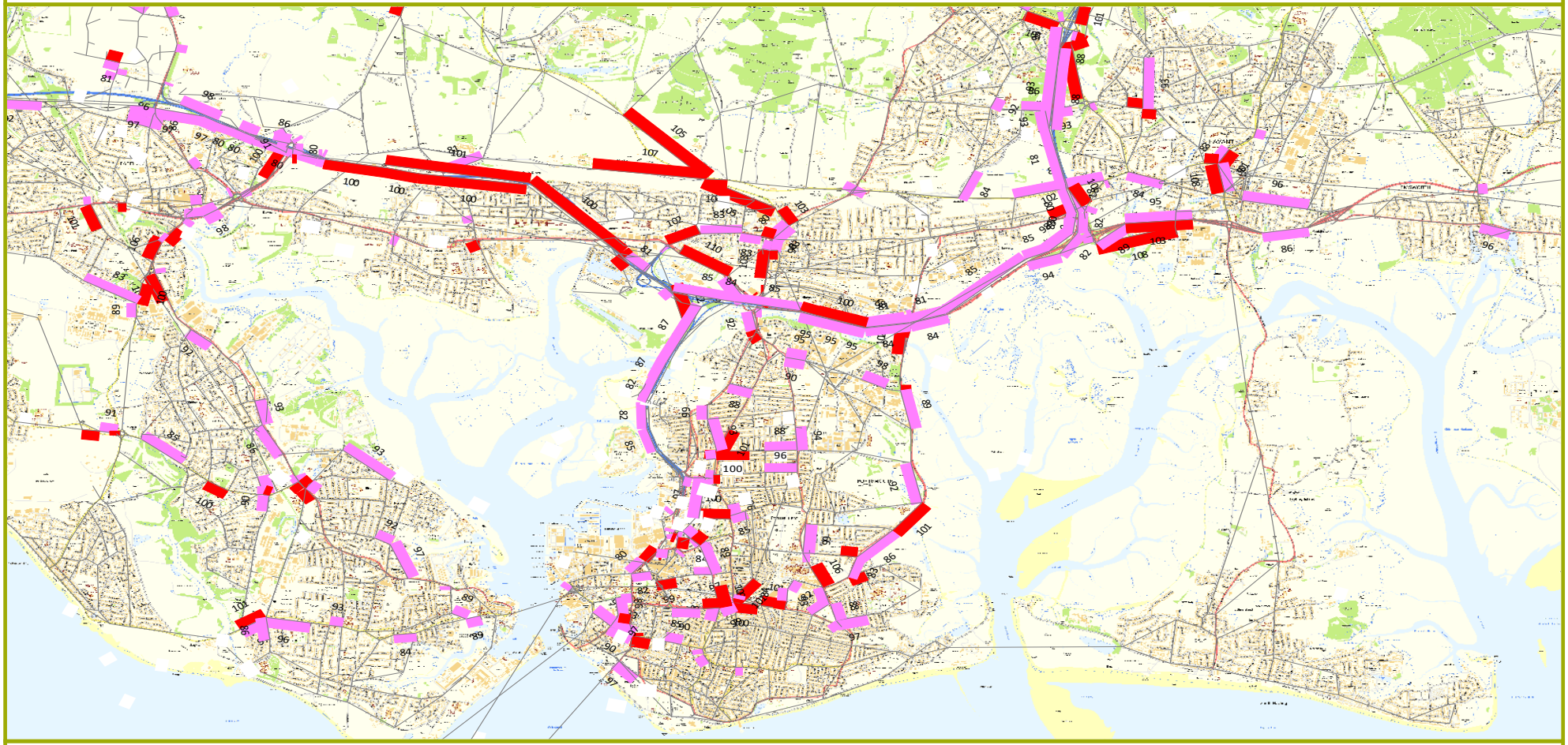
Portsmouth Local Plan Plots - 2041 - PM Peak Do Minimum V/C - Strategic View



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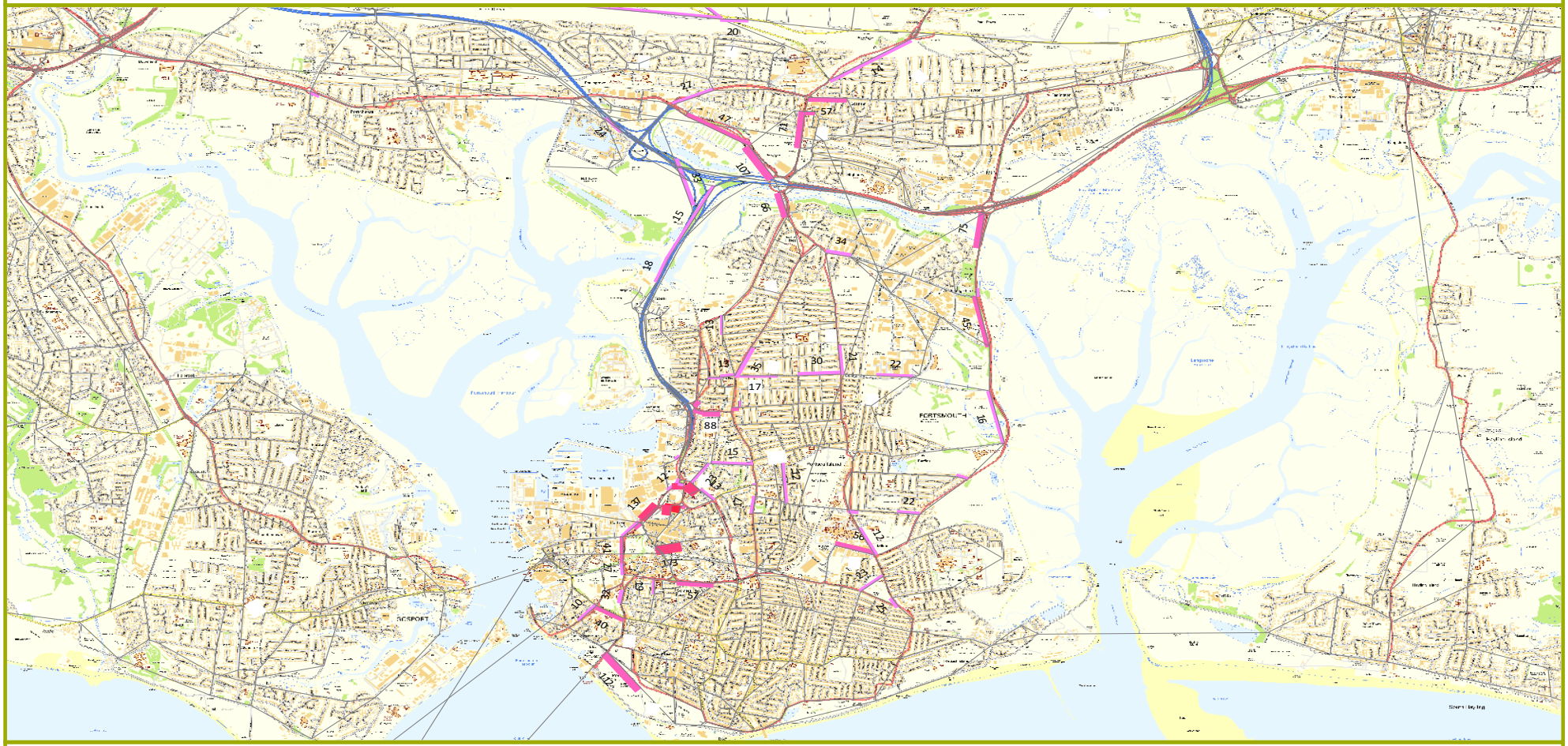
Portsmouth Local Plan Plots - 2041 - AM Peak Do Minimum vs Baseline Delay Difference - Wider View



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Portsmouth Local Plan Plots - 2041 - PM Peak Do Minimum vs Baseline Delay Difference - Wider View

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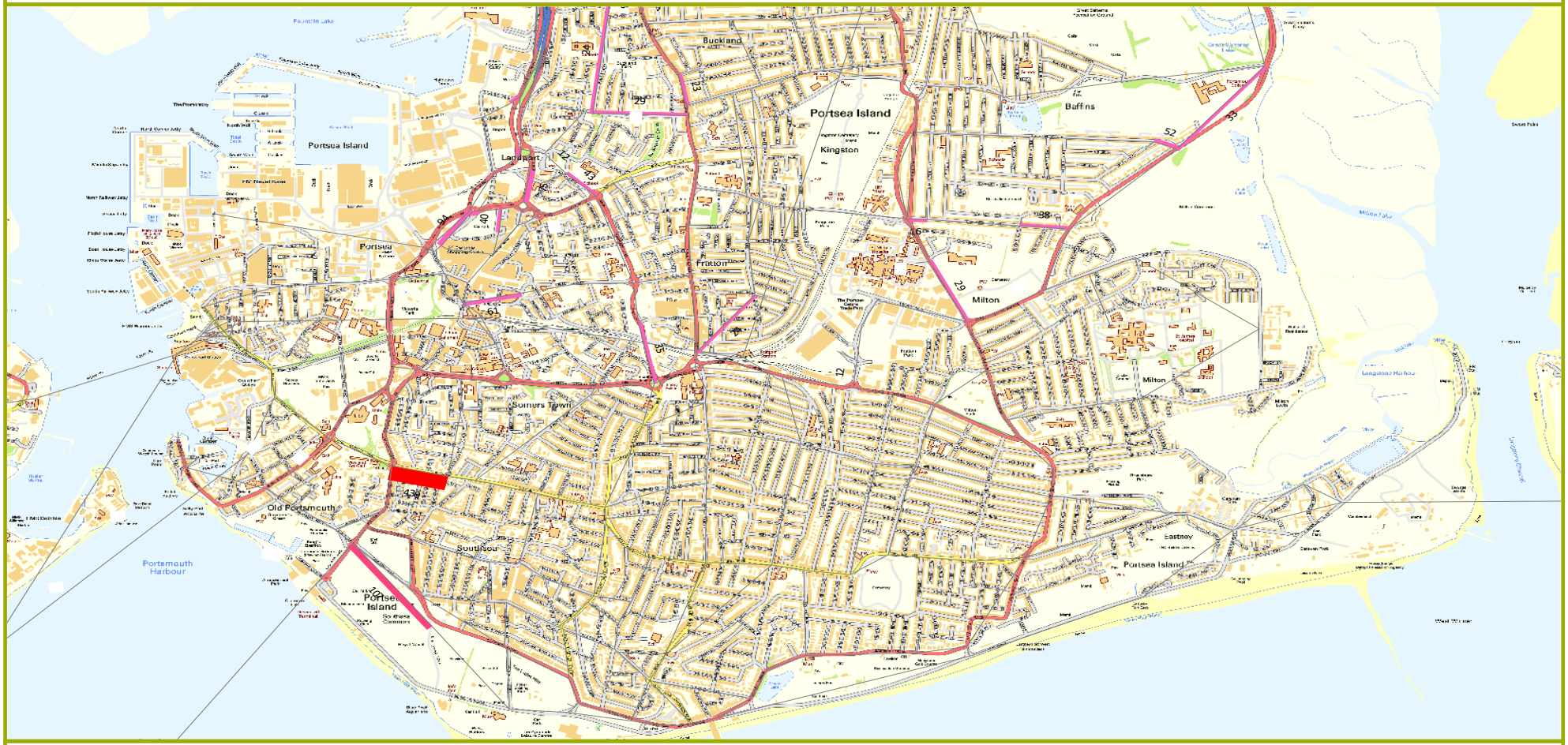
Portsmouth Local Plan Plots - 2041 - PM Peak Do Minimum vs Baseline Delay Difference - Portsmouth Southern Area



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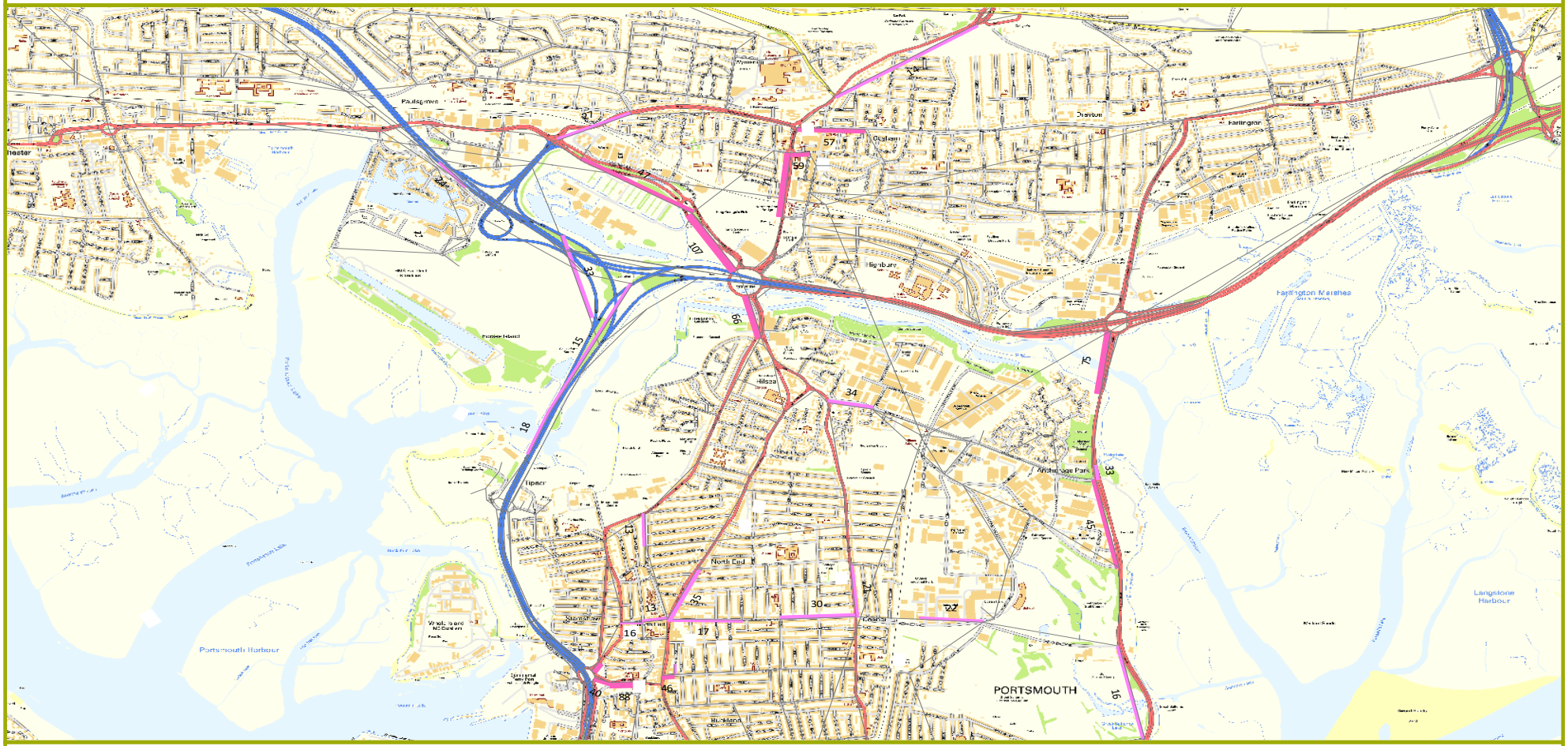
SYSTRA

Portsmouth Local Plan Plots - 2041 - AM Peak Do Minimum vs Baseline Delay Difference - Portsmouth Northern Area



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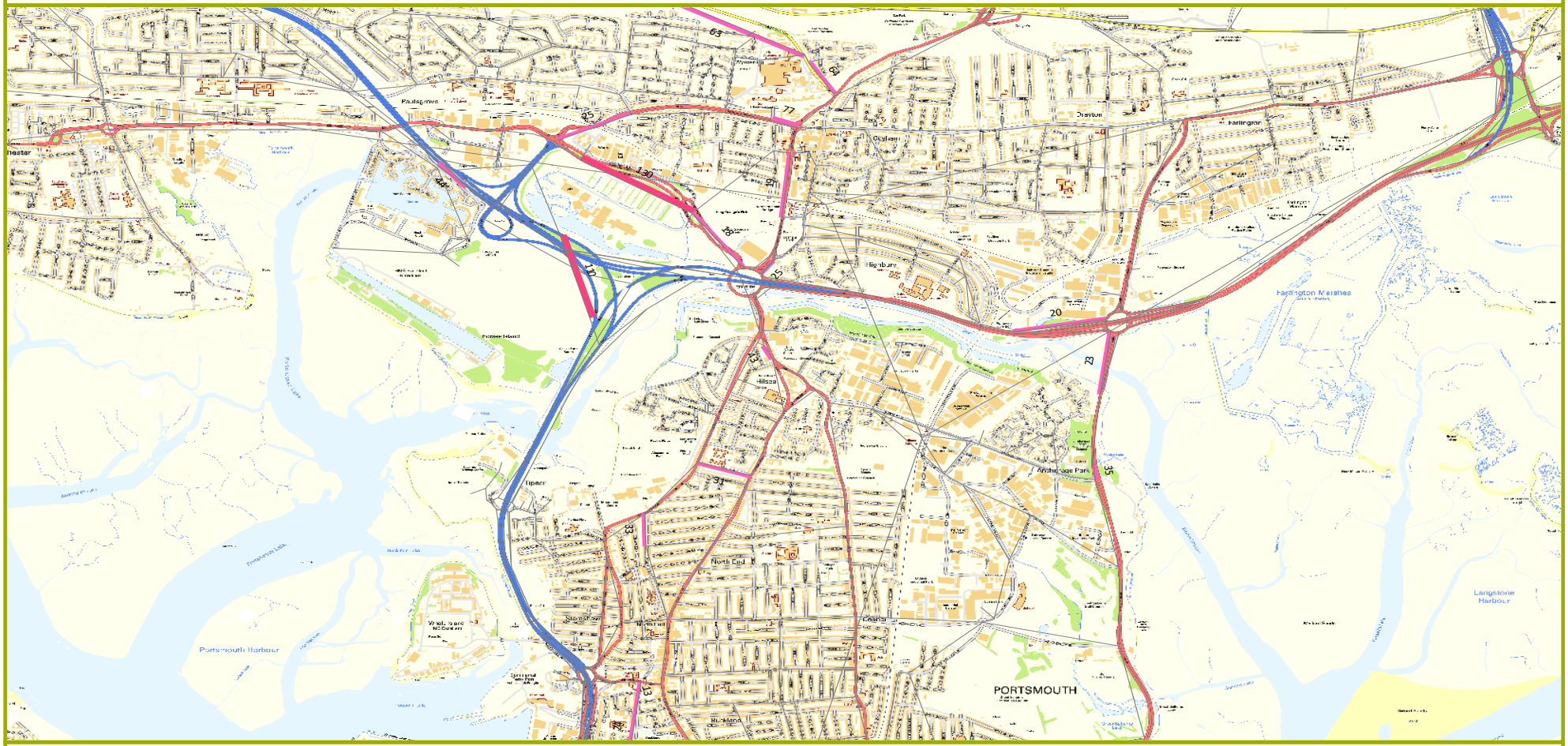

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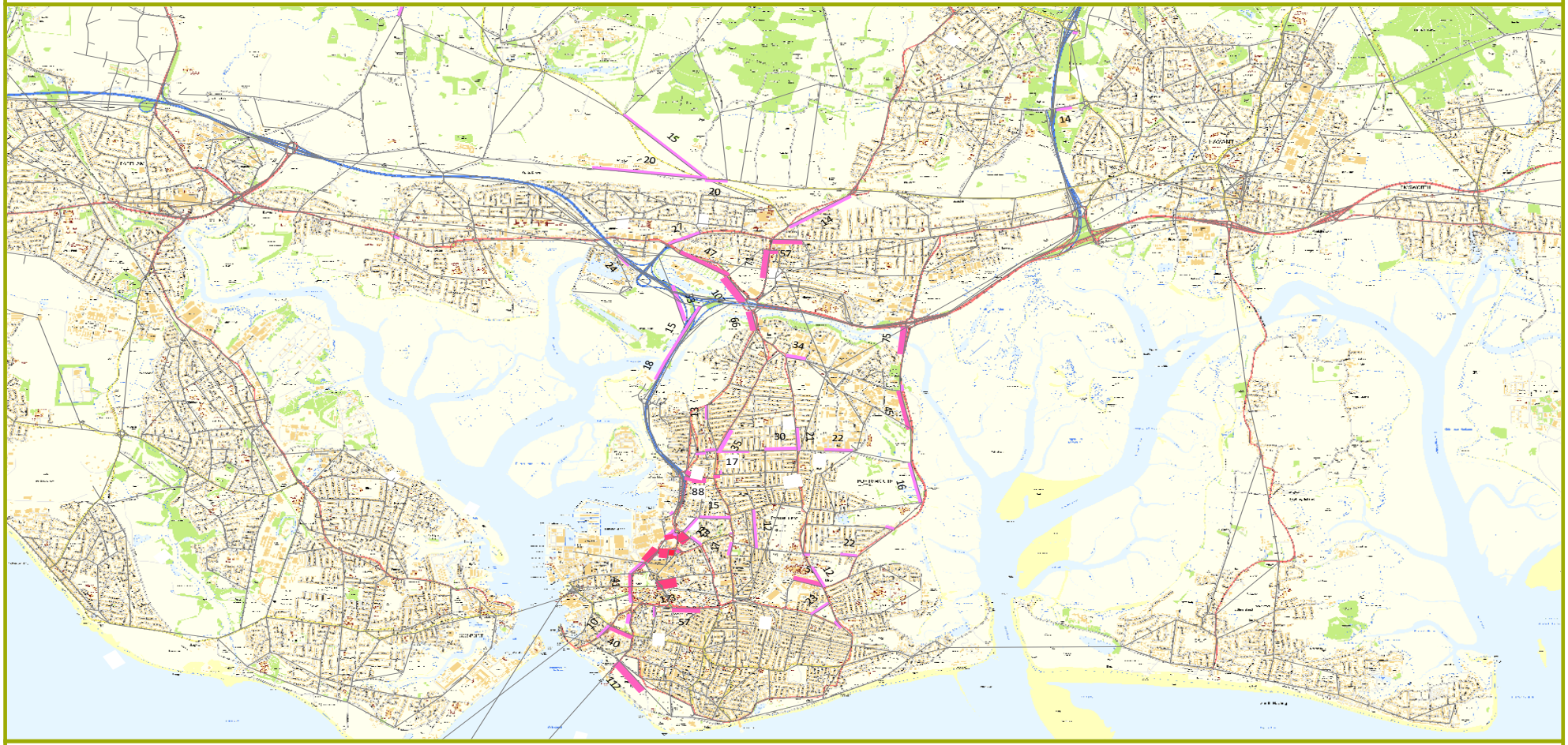

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Portsmouth Local Plan Plots - 2041 - PM Peak Do Minimum vs Baseline Delay Difference - Strategic View

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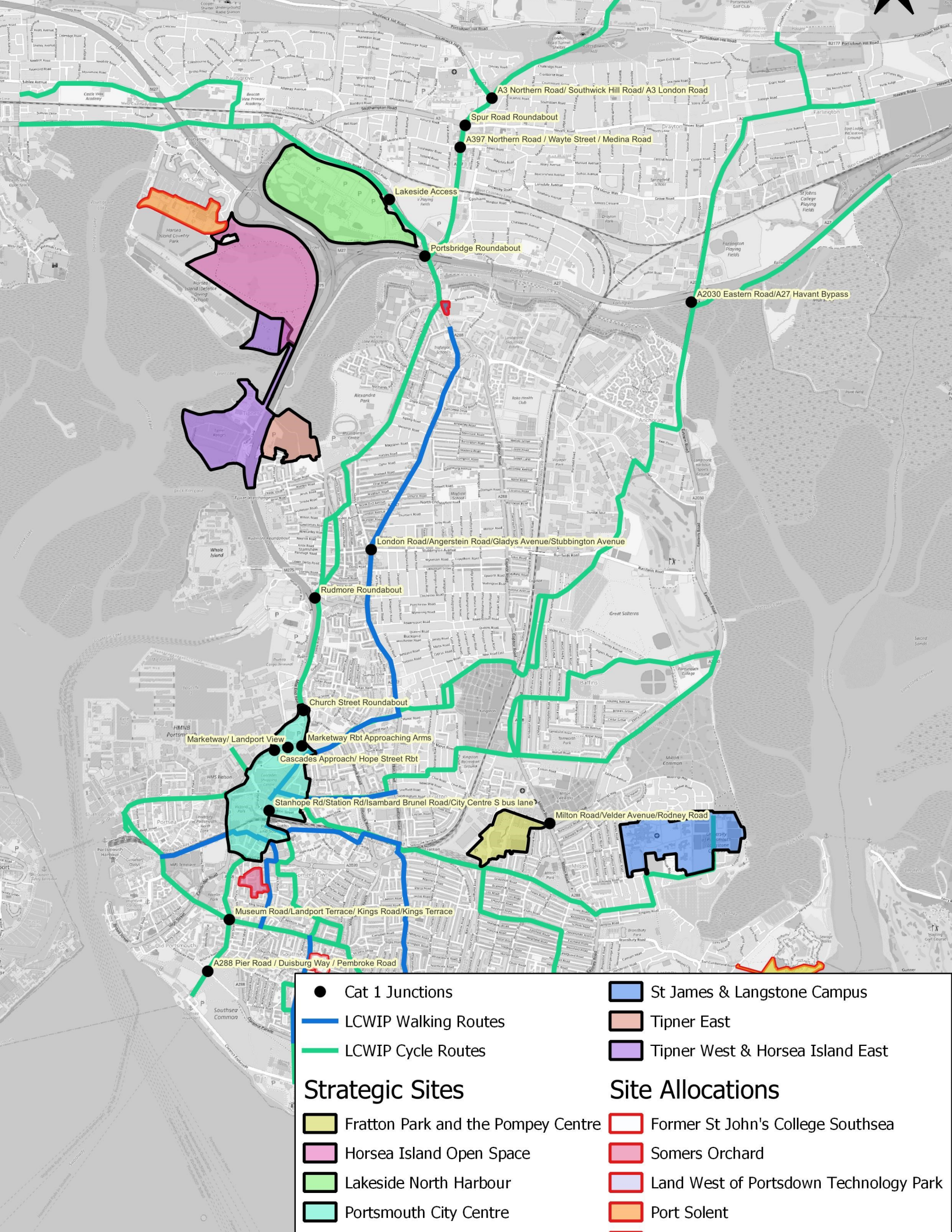
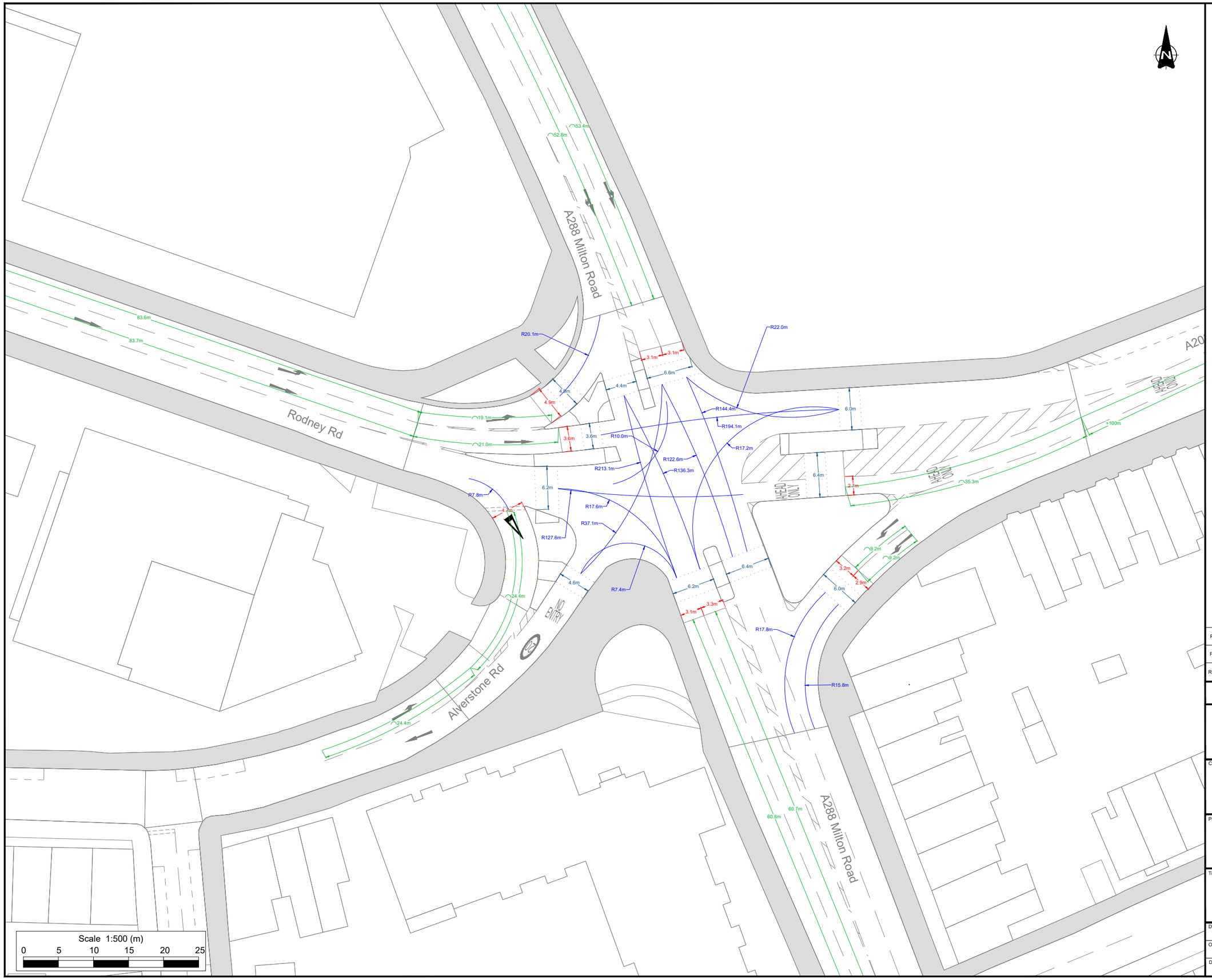
Appendix E - Category 1 Junction Map


A3 Northern Road/ Southwick Hill Road/ A3 London Road
Spur Road Roundabout
A397 Northern Road / Wayte Street / Medina Road
Lakeside Access
Portsbridge Roundabout
A2030 Eastern Road/A27 Havant Bypass
London Road/Angerstein Road/Gladys Avenue/Stubbington Avenue
Rudmore Roundabout
Church Street Roundabout
Marketway/ Landport View
Marketway Rbt Approaching Arms
Cascades Approach/ Hope Street Rbt
Stanhope Rd/Station Rd/Isambard Brunel Road/City Centre S bus lane
Milton Road/Velder Avenue/Rodney Road
Museum Road/Landport Terrace/ Kings Road/Kings Terrace
A288 Pier Road / Duisburg Way / Pembroke Road
Cat 1 Junctions
LCWIP Walking Routes
LCWIP Cycle Routes
St James & Langstone Campus
Tipner East
Tipner West & Horsea Island East
Strategic Sites
Fratton Park and the Pompey Centre
Horsea Island Open Space
Lakeside North Harbour
Portsmouth City Centre
Site Allocations
Former St John's College Southsea
Somers Orchard
Land West of Portsdown Technology Park
Port Solent

Appendix F - Existing Junction Geometry Drawings



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Key:

- Lane Width
- Lane / Flare Length
- Turning Radius
- Signalized pedestrian crossing
- Signalized pedestrian crossing Width
- Non-signalized pedestrian crossing
- Footway

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P1	26/01/24	Drawing Number/Title Ammendment	BG	ARM	ES	ES
P0	25/11/19	Initial Issue	ARM	DH	EJ	DM

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Client

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Project

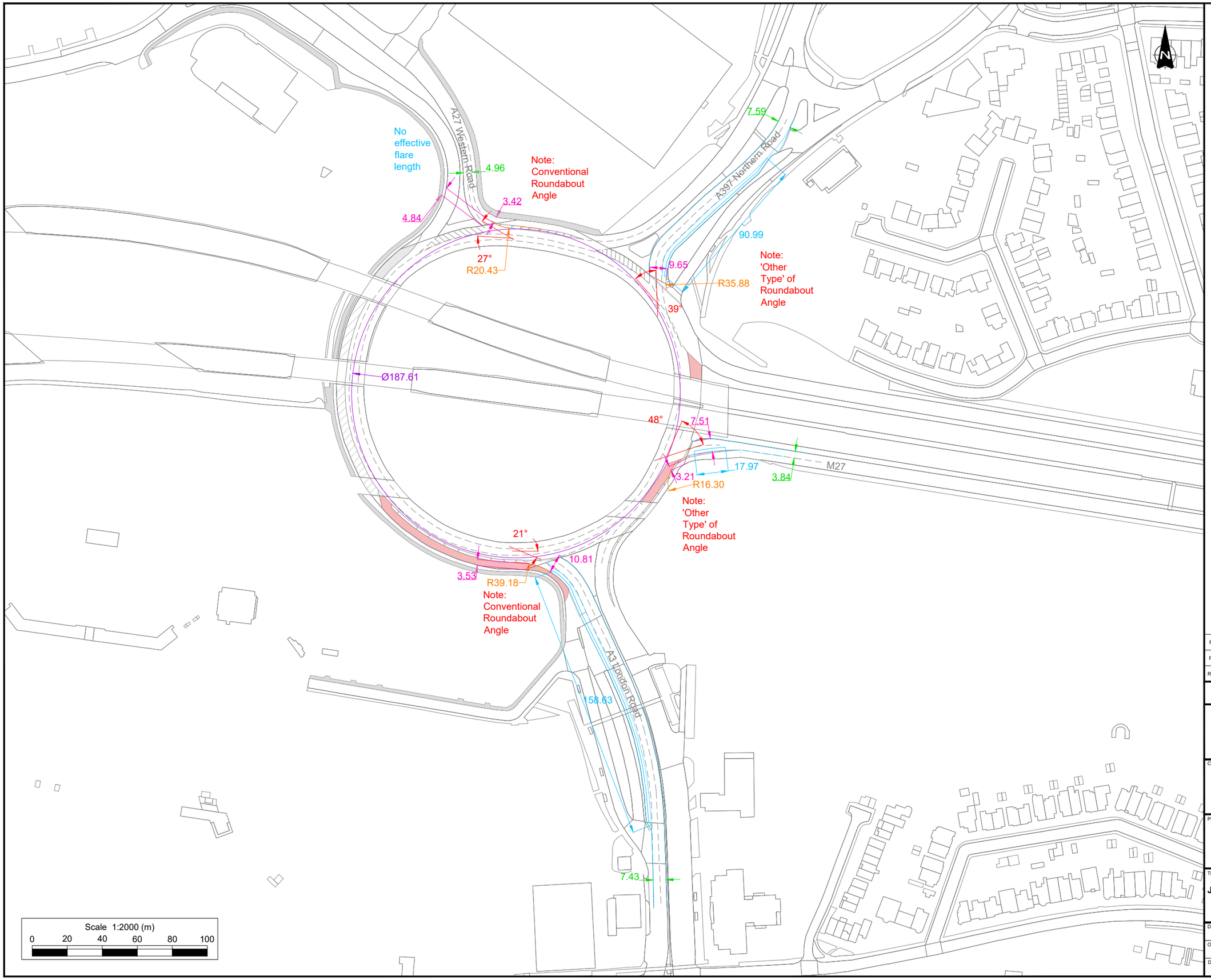
Portsmouth Local Plan Support

Title

Junction 1 - Milton Road / Velder Avenue / Rodney Road - Existing Geometries

Drawn	Checked	Checked	Approved
ARM	DH	EJ	DM
Original drg. size: A3	Date: 25-11-2019	Scale: 1:500	Drawing Status: Information

Drawing Number: GB01T23C11-DWG-100-01 Rev. P1



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Key:

- Approach Road Half Width
- Effective Flare Length
- Entry Radius
- Inscribed Circular Diameter
- Entry Width
- Conflict Entry Angle
- Bus Lane/ Bus Stop
- Footway

Rev	Date	Revision details	Drawn	Check.	Approv.
P1	26/01/24	Drawing Number/Title Ammendment	BG	ARM	ES
P0	27/11/19	Initial Issue	ES	DH/EJ	DM

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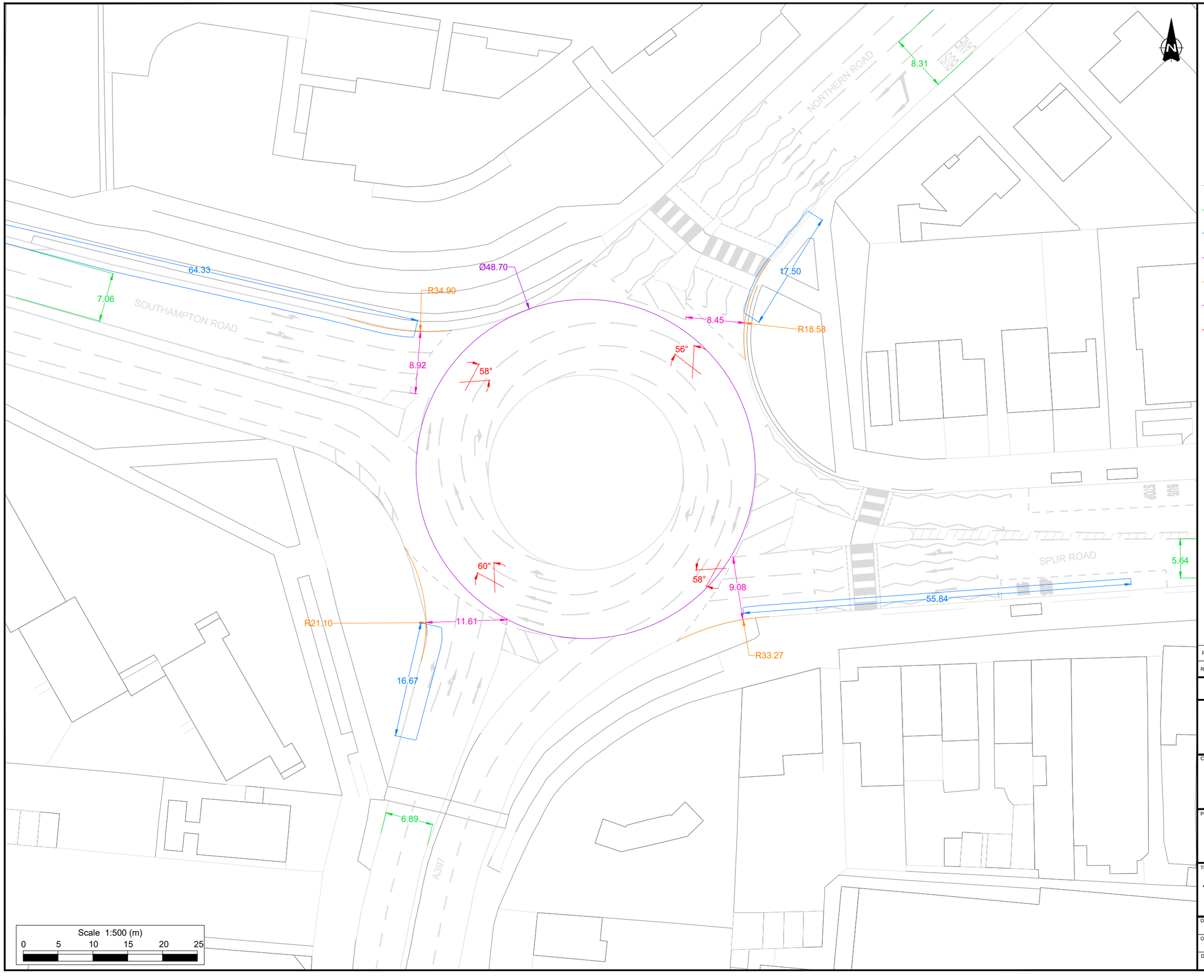
Client: **Portsmouth City Council**

Project: **Portsmouth Local Plan Support**

Title: **Junction 2 - Portsbridge Roundabout - Existing Geometries**

Drawn	Checked	Approved
ES	DH/EJ	DM
Original drg. size: A3	Date: 27-11-2019	Scale: 1:2000
Drawing Status: Information	Drawing Number: GB01T23C11-DWG-100-02	Rev.: P1



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Key:

- OS survey
- Approach Road Half Width
- Effective Flare Length
- Entry Width
- Entry Radius
- Inscribed Circular Diameter
- Conflict Entry Angle

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P0	12/10/23	Initial issue	BG	ARM	NL	NL

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Portsmouth City Council

Project

Portsmouth Local Plan Strategic Transport Assessment

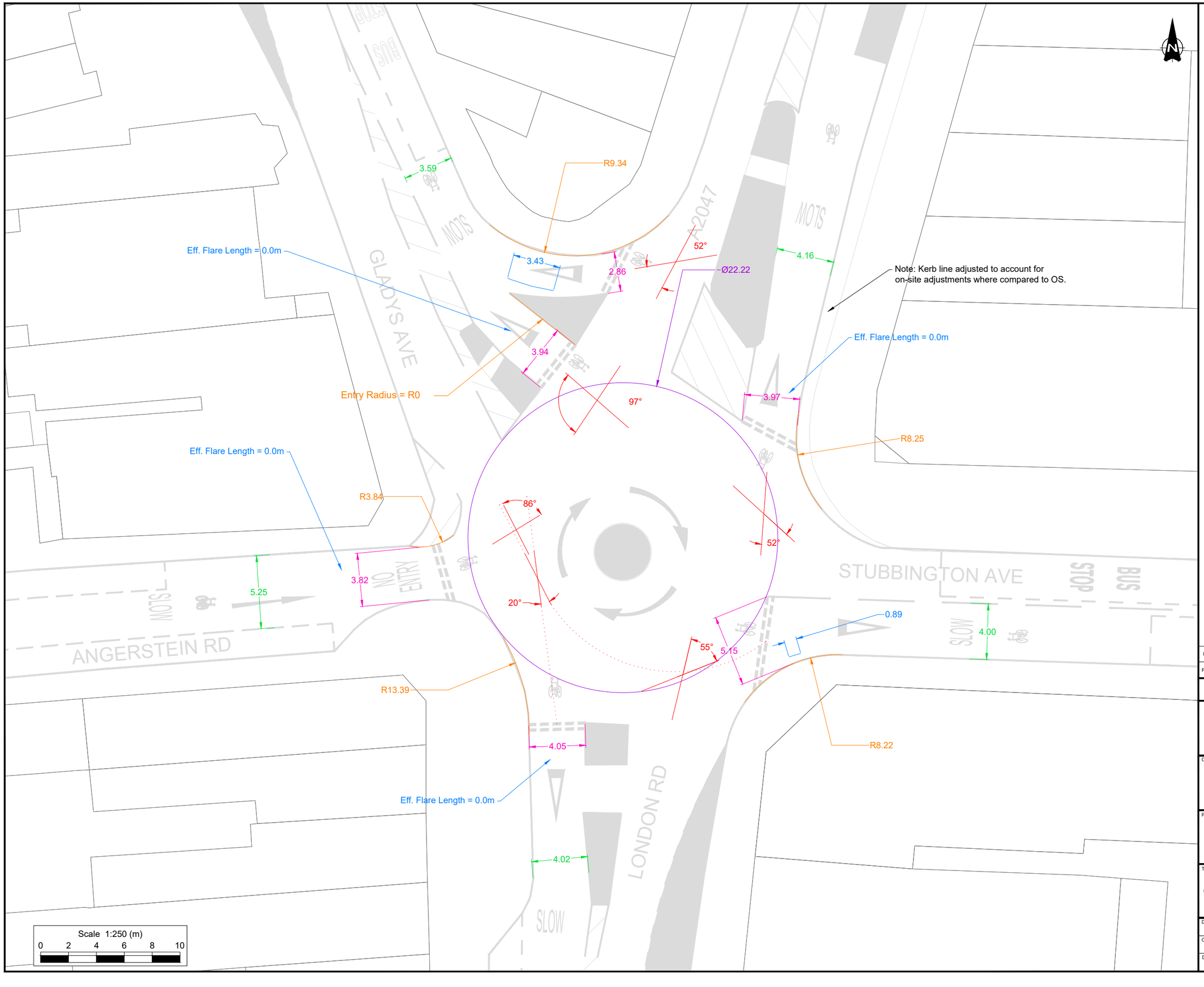
Title

Junction 3 - Spur Road Roundabout - Existing Geometries

Drawn	Checked	Reviewed	Approved
BG	ARM	NL	NL

Original drg. size	Date	Scale	Drawing Status
A3	12/10/2023	1:500	Preliminary

Drawing Number	Rev.
GB01T23C11-dwg-100-03	P0



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Key:

- OS survey
- Approach Road Half Width
- Effective Flare Length
- Entry Width
- Entry Radius
- Inscribed Circular Diameter
- Conflict Entry Angle

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P0	09/10/23	Initial issue	BG	ARM	NL	NL

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Project

Portsmouth Local Plan Strategic Transport Assessment

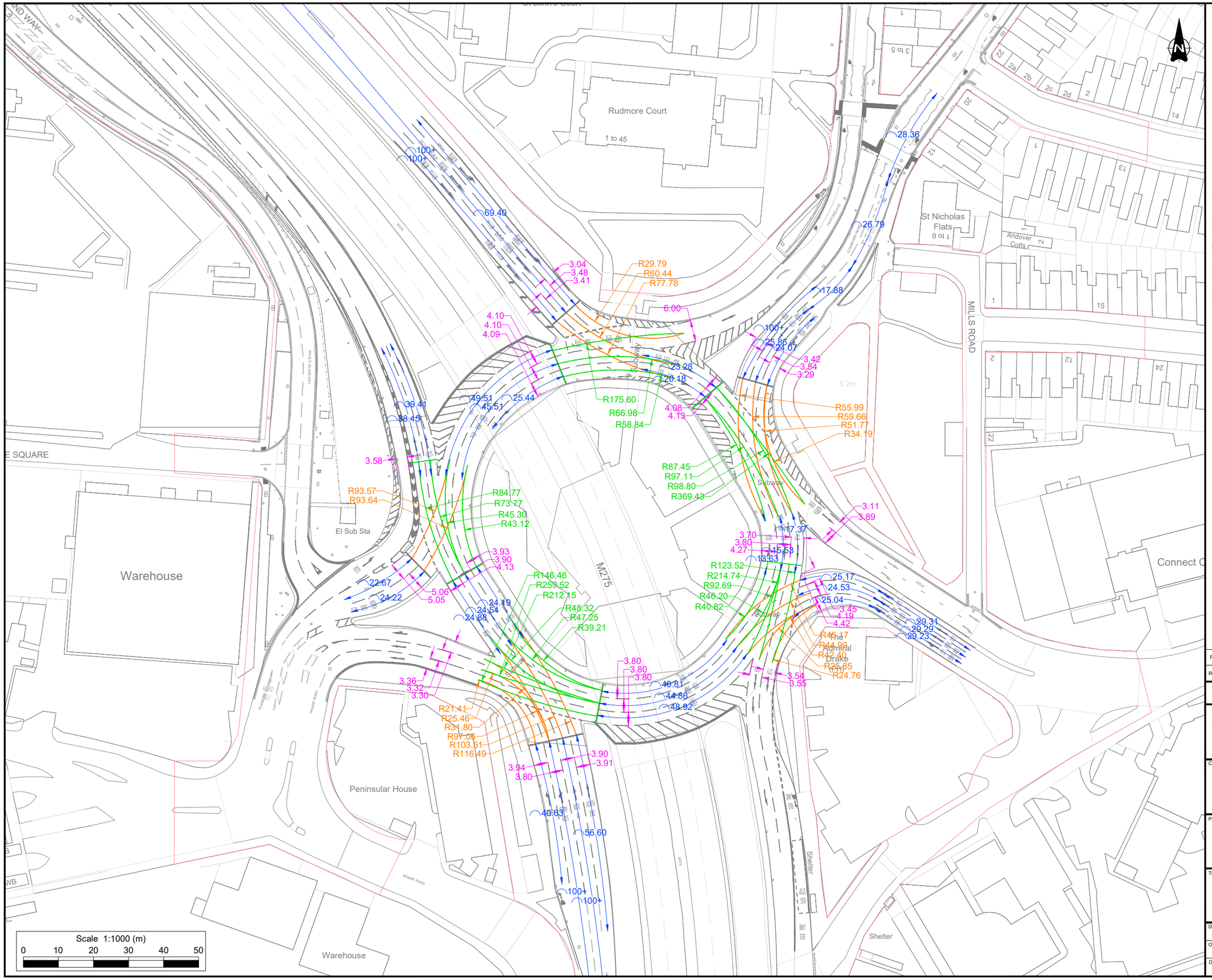
Title

Junction 5 - London Road / Angerstein Road / Glays Avenue / Stubbington Avenue - Existing Geometries

Drawn	Checked	Reviewed	Approved
BG	ARM	NL	NL

Original drg. size	Date	Scale	Drawing Status
A3	09/10/2023	1:250	Preliminary

Drawing Number: GB01T23C11-dwg-100-05 Rev: P0



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Key:

- OS survey
- Internal Turning Radius
- External Turning Radius
- Lane Width
- Lane / Flare Length

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P0	23/10/23	Initial issue	BG	ARM	NL	NL

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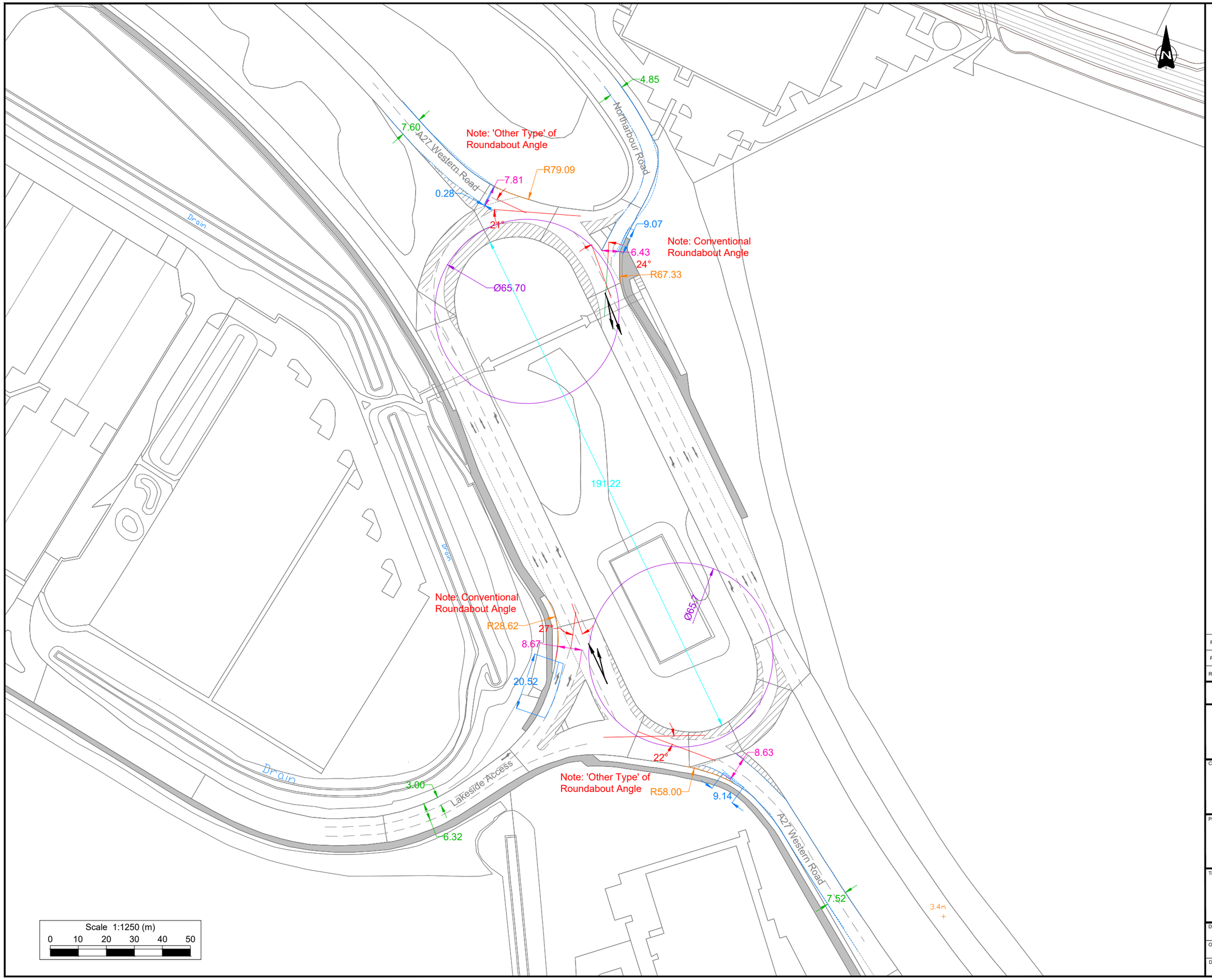
Client: Portsmouth City Council

Project: **Portsmouth Local Plan Strategic Transport Assessment**

Title: **Junction 7 - Rudmore Roundabout - Existing Geometries**

Drawn	Checked	Reviewed	Approved
BG	ARM	NL	NL
Original drg. size	**Date**	**Scale**	**Drawing Status**
A3	23/10/2023	1:1000	Preliminary
Drawing Number			**Rev.**
GB01T23C11-DWG-100-07			P0



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Key:

- Approach Road Half Width
- Effective Flare Length
- Entry Radius
- Inscribed Circular Diameter
- Entry Width
- Conflict Entry Angle
- Length of Roundabout
- Footway

Rev	Date	Revision details	Drawn	Check.	Approv.
P1	26/01/24	Drawing Number/Title Ammendment	BG	ARM	ES
P0	27/11/19	Initial Issue	ES	DH/EJ	DM

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Client: **Portsmouth City Council**

Project: **Portsmouth Local Plan Support**

Title: **Junction 8 - Lakeside Access - Existing Geometries**

Drawn	Checked	Approved
ES	DH/EJ	DM
Original drg. size: A3	Date: 27-11-2019	Scale: 1:1250
Drawing Status: Information	Drawing Number: GB01T23C11-DWG-100-08	Rev.: P1

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Key:

- Lane Width
- Lane / Flare Length
- Turning Radius (Internal)
- Turning Radius (External)
- Bus Lane / Bus Stop
- Signalised pedestrian crossing Width
- Fooway

Scale 1:1000 (m)
0 10 20 30 40 50

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P1	26/01/24	Drawing Number/Title Ammendment	BG	ARM	ES	ES
P0	07/05/20	Initial Issue	DH	DH	EJ	-

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Client
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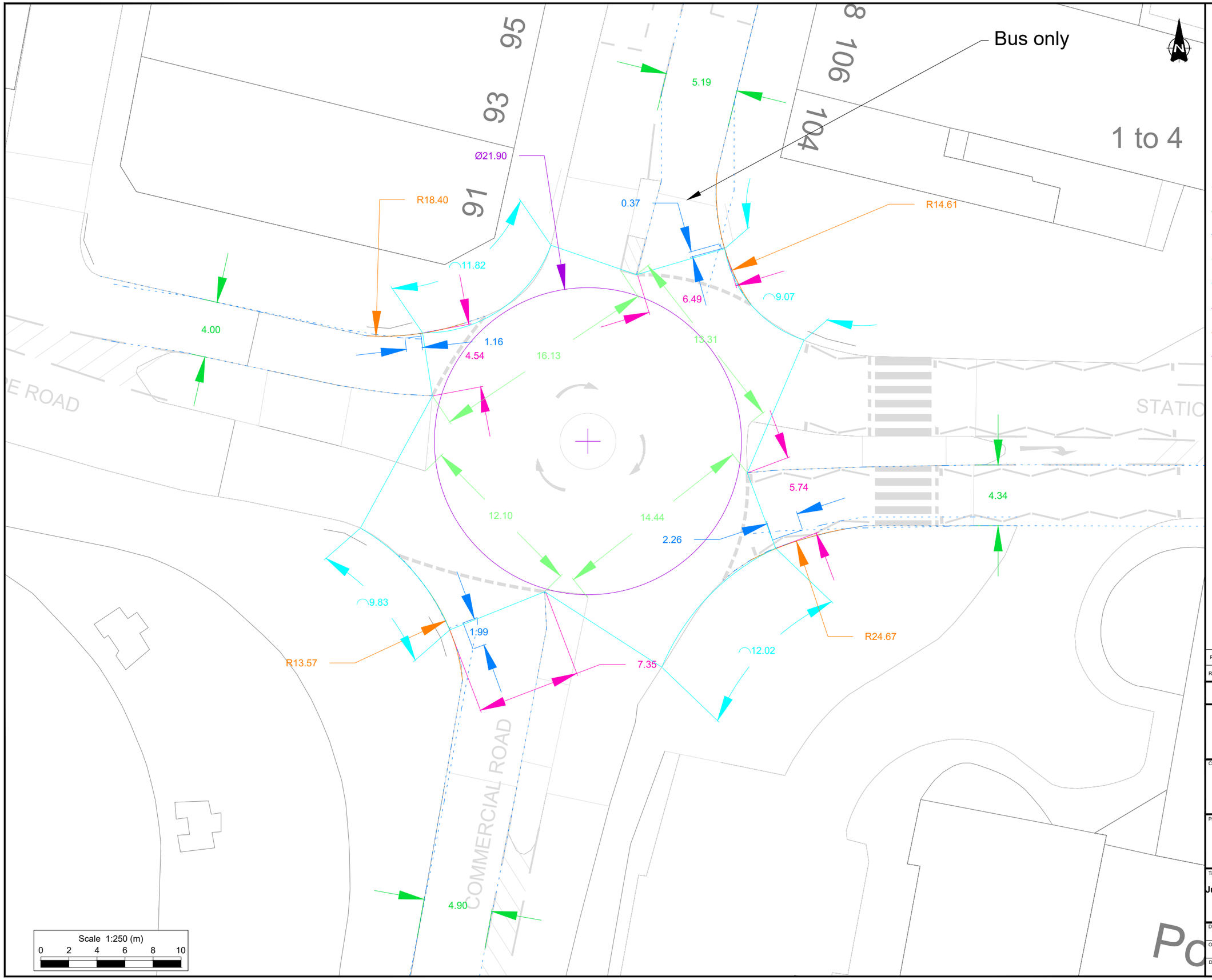
Project
Portsmouth Local Plan Support

Title
Junction 9 - A2030 Eastern Road / A27 Havant Bypass - Existing Geometries

Drawn	Checked	Checked	Approved
DH	DH	EJ	-
Original drg. size	Date	Scale	Drawing Status
A3	07-05-2020	1:1000	Information

Drawing Number: GB01T23C11-DWG-100-09 Rev. P1



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Key:

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- Approach Road Half Width
- Effective Flare Length
- Distance to Next Arm
- Entry Corner Kerb Line Distance
- Entry Width
- Entry Radius
- Inscribed Circular Diameter

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Client

Portsmouth City Council

Project

Portsmouth Local Plan Strategic Transport Assessment

Title

Junction 10 - Commercial Road / Stanhope Road / Station Street - Existing Geometries

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BG	ARM	NL	NL

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A3	09/10/2023	1:250	Preliminary

Drawing Number	Rev.
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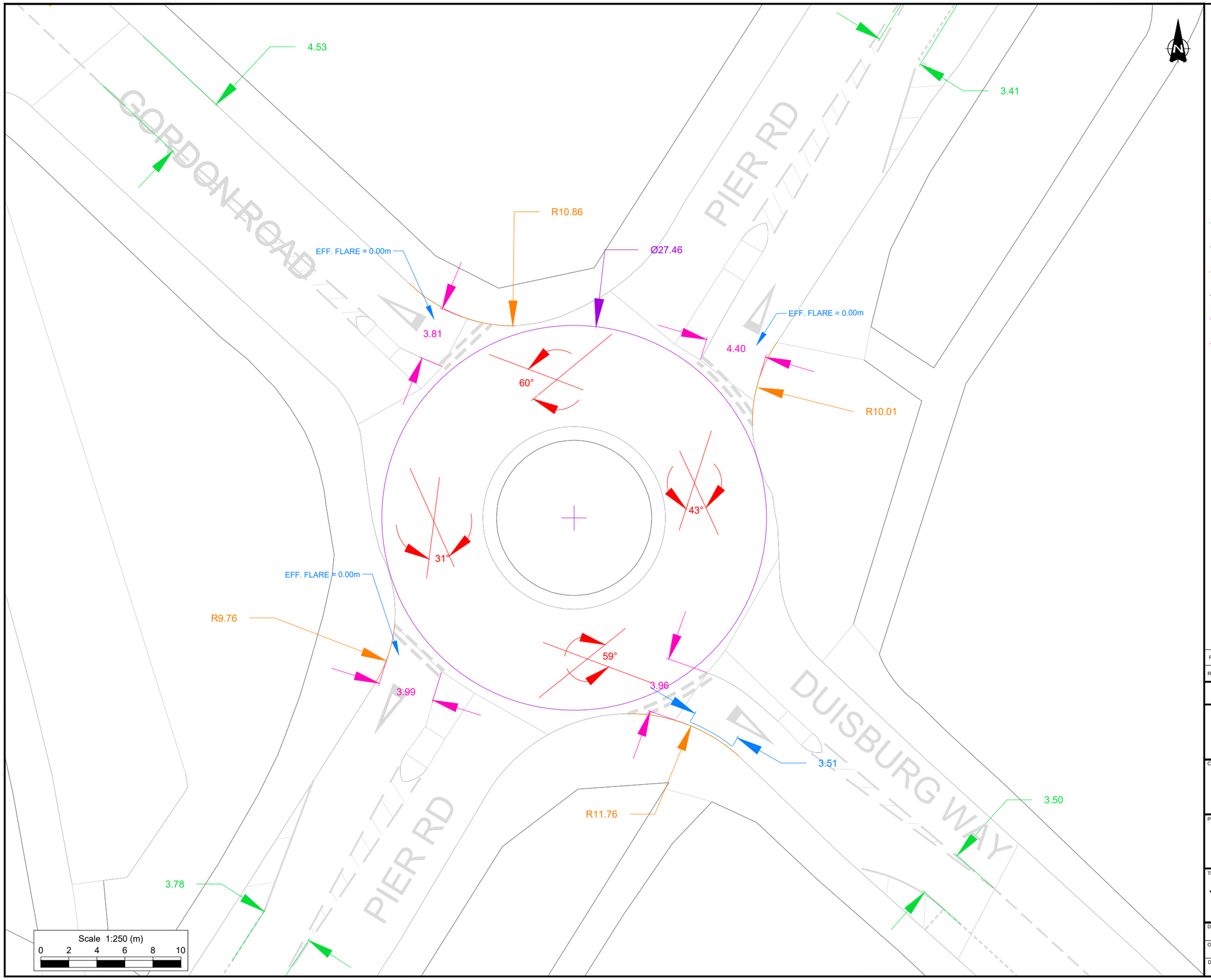

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Portsmouth Local Plan Strategic Transport Assessment

Title

Junction 11 - A288 Pier Road / Duisburg Way / Pembroke Road - Existing Geometries

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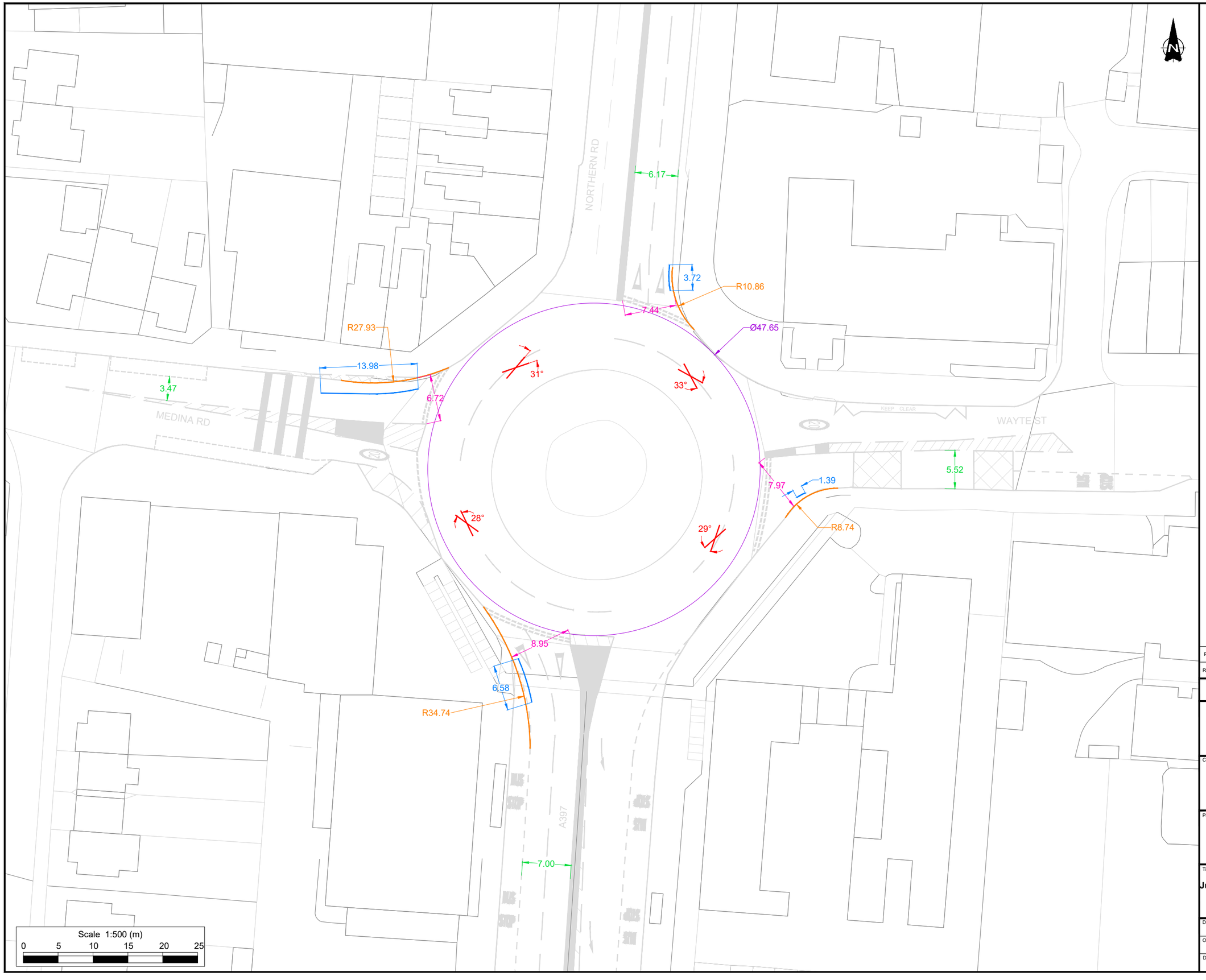
Original drg. size: A3	Date: 05/10/2023	Scale: 1:250	Drawing Status: Preliminary

Drawing Number: GB01T23C11-DWG-100-11 Rev: P0



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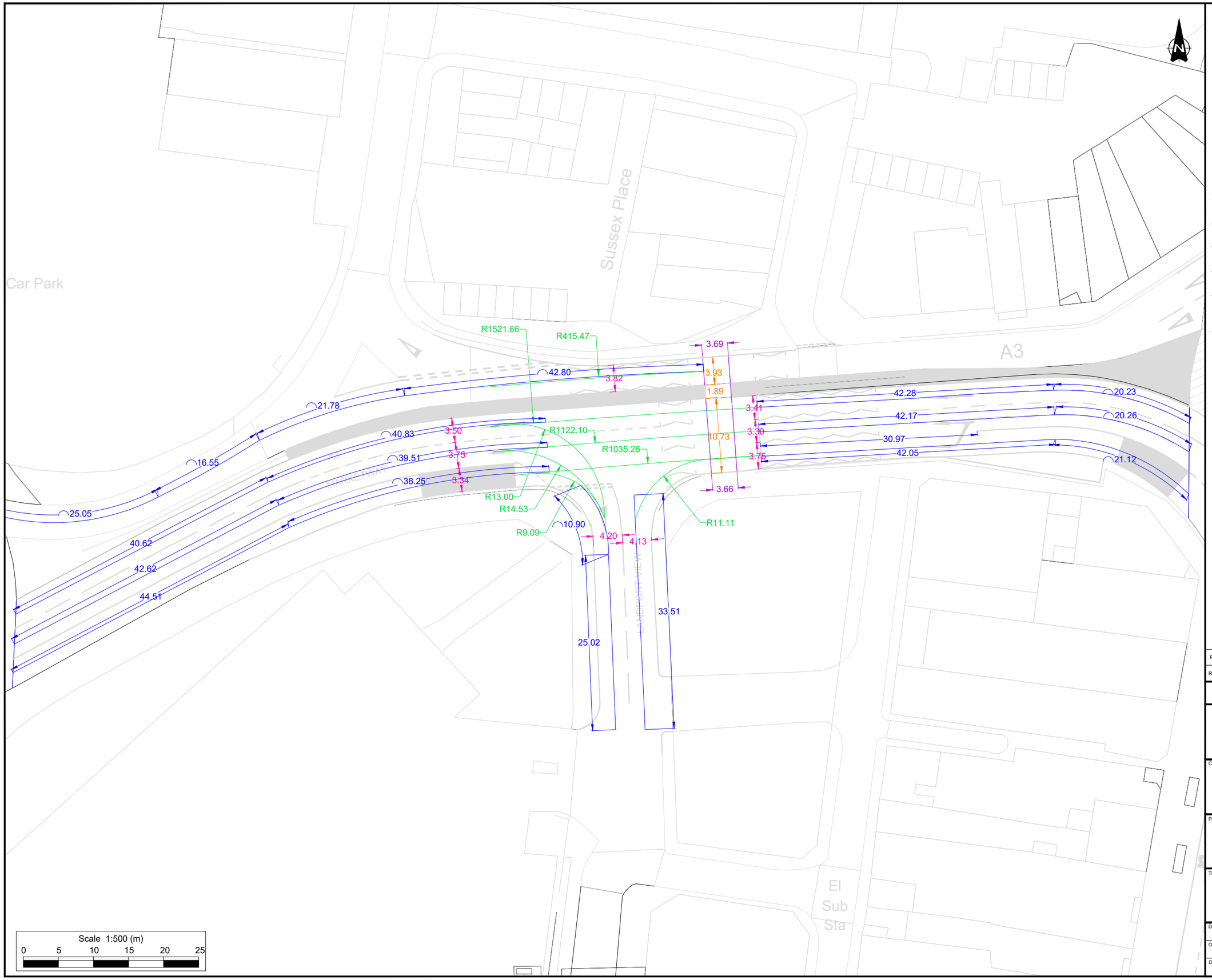
Project: **Portsmouth Local Plan Strategic Transport Assessment**

Title: **Junction 12 - A397 Northern Road / Wayte Street / Medina Road - Existing Geometries**

Drawn	Checked	Reviewed	Approved
BG	ARM	NL	NL
Original drg. size: A3	Date: 16/10/2023	Scale: 1:500	Drawing Status: Preliminary

Drawing Number: GB01T23C11-DWG-100-12 Rev: P0



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Key:

- OS survey
- Turning Radius
- Lane Width
- Lane / Flare Length
- Signalised Pedestrian Crossing Width
- Signalised Pedestrian Crossing Length

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Client

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Project

Portsmouth Local Plan Strategic Transport Assessment

Title

Junction 14 - Marketway / Landport View - Existing Geometries

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A3	11/10/2023	1:500	Preliminary

Drawing Number	Rev.
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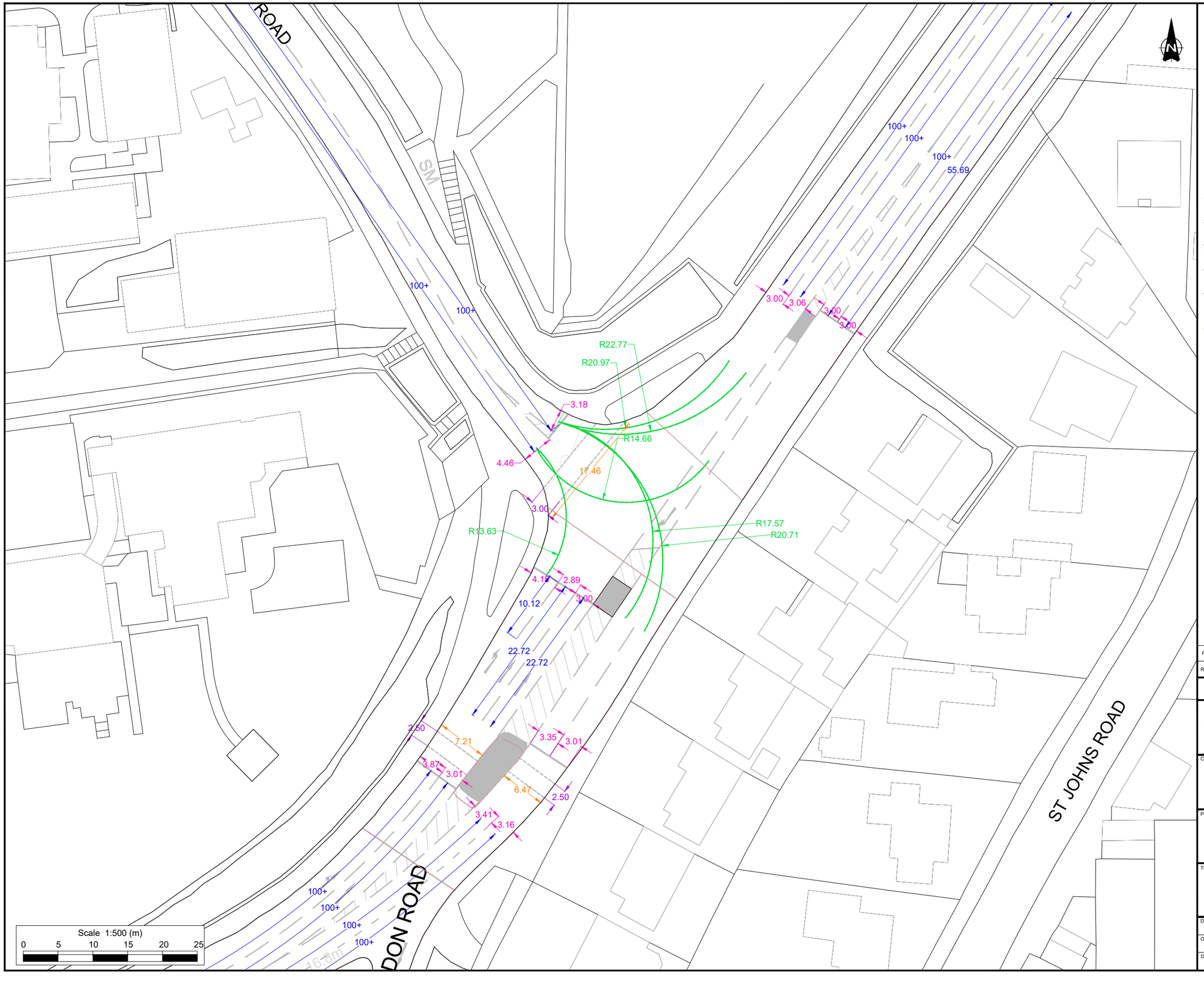

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Key:

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- Turning Radius
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- Lane / Flare Length
- Signalised Pedestrian Crossing Width
- Signalised Pedestrian Crossing Length

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Project: **Portsmouth Local Plan Strategic Transport Assessment**

Title: **Junction 15 - Southwick Hill / London Road - Existing Geometries**

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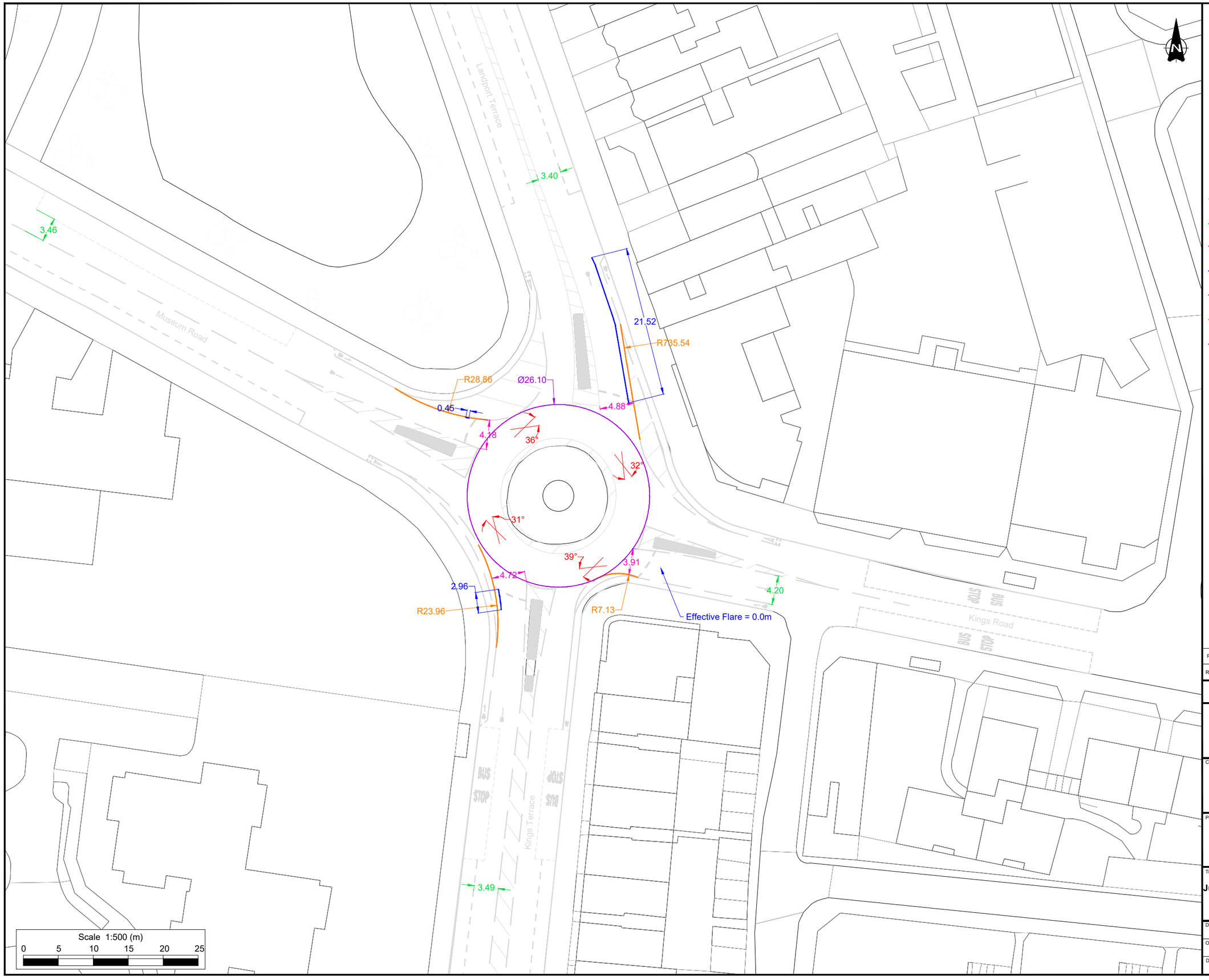
Original drg. size	Date	Scale	Drawing Status
A3	25/10/2023	1:500	Preliminary

Drawing Number: GB01T23C11-DWG-100-15 Rev. P0



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Client

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Project

Portsmouth Local Plan Strategic Transport Assessment

Title

Junction 16 - Museum Road / Landport Terrace / Kings Road - Existing Geometries

Drawn	Checked	Reviewed	Approved
BG	DH	NL	NL
Original drg. size: A3	Date: 30/10/2023	Scale: 1:500	Drawing Status: Preliminary

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Key:

- Lane Width
- Lane / Flare Length
- Turning Radius (Internal)
- Turning Radius (External)
- Bus Lane / Bus Stop
- Signalized pedestrian crossing
- Signalized pedestrian crossing Width
- Fooway

A3 Mile End Rd

A3 Mile End Rd

Church St

Hope St

Scale 1:500 (m)

0 5 10 15 20 25

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P1	26/01/24	Drawing Number/Title Ammendment	BG	ARM	ES	ES
P0	20/11/19	Initial Issue	DH	DH	EJ	DM

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Client: **Portsmouth City Council**

Project: **Portsmouth Local Plan Support**

Title: **Junction 4 - Church Street Roundabout - Existing Geometries**

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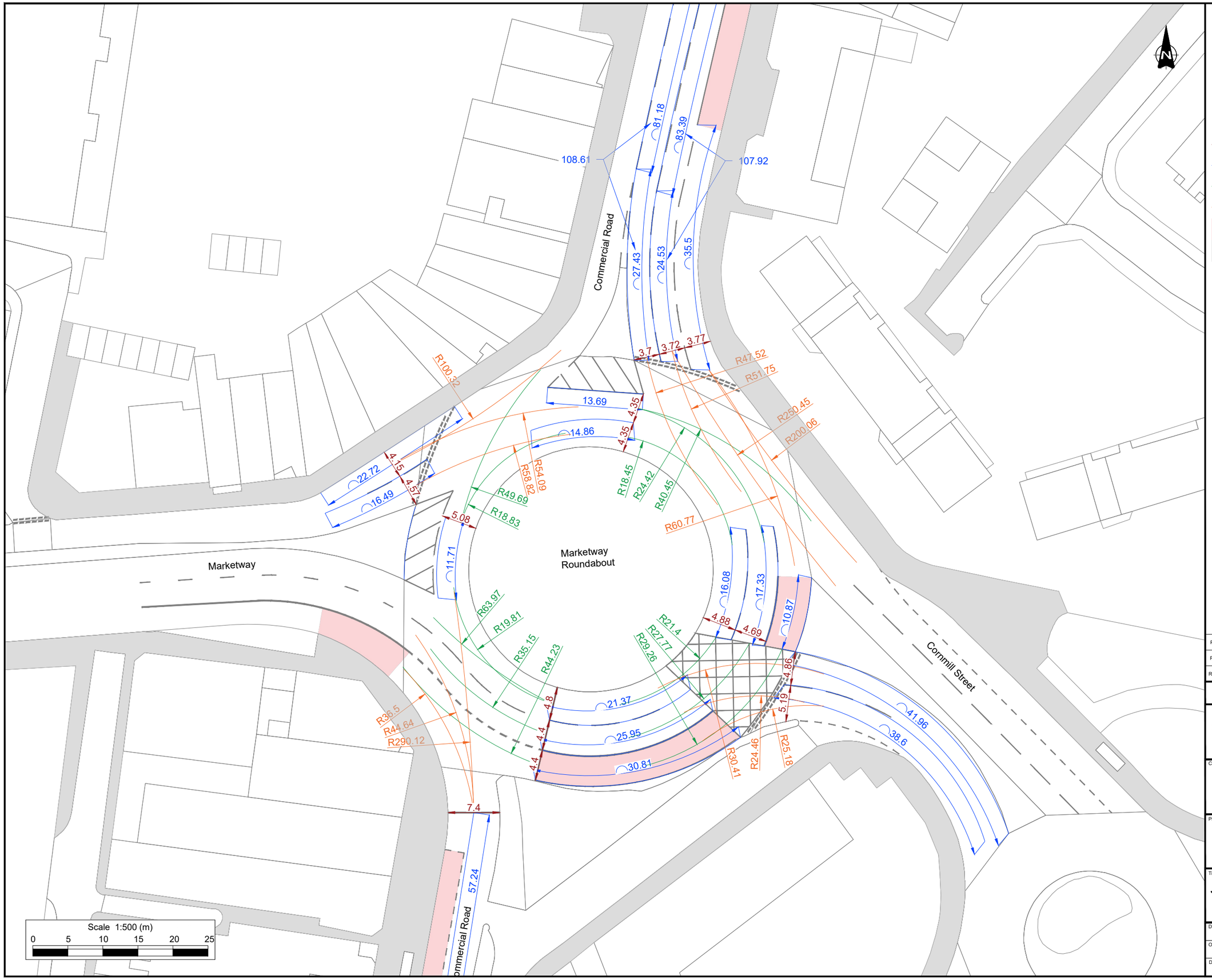
Original drg. size	Date of Issue	Scale	Drawing Status
A3	20-11-2019	1:500	Information

Drawing Number: GB01T23C11-DWG-100-04

Rev.: P1



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Key:

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- Lane / Flare Length
- Turning Radius (Internal)
- Turning Radius (External)
- Bus Lane / Bus Stop
- Footway

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Client: **Portsmouth City Council**

Project: **Portsmouth Local Plan Support**

Title: **Junction 6 - Marketway Roundabout - Existing Geometries**

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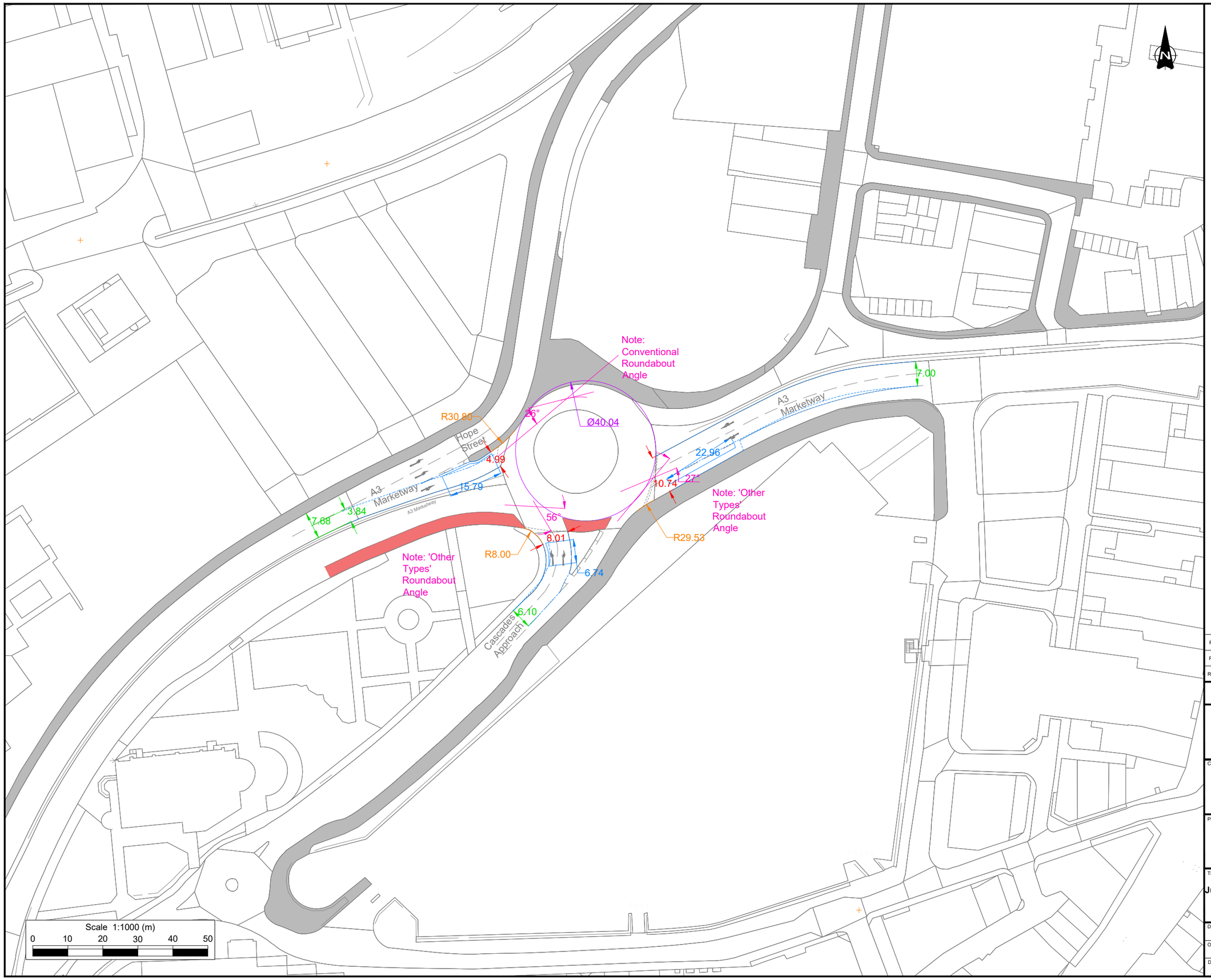
Original drg. size: A3	Date: 14-11-2019	Scale: 1:500
Drawing Status: Information	Drawing Number: GB01T23C11-DWG-100-06	Rev.: P1



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Key:

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- Inscribed Circular Diameter
- Entry Width
- Conflict Entry Angle
- Bus Lane/ Bus Stop
- Footway

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Client: **Portsmouth City Council**

Project: **Portsmouth Local Plan Support**

Title: **Junction 13 - Hope Street Roundabout - Existing Geometries**

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Original drg. size: A3	Date: 31-10-2019	Scale: 1:1000
Drawing Status: Information	Drawing Number: GB01T23C11-DWG-100-13	Rev.: P1

Appendix G - National Highways Technical Note

Portsmouth Local Plan Modelling

24/05/2024

Reference number GB01T23C11

PORTSMOUTH LOCAL PLAN
ASSESSMENT OF STRATEGIC ROAD NETWORK

SYSTRA

PORTSMOUTH LOCAL PLAN MODELLING

ASSESSMENT OF STRATEGIC ROAD NETWORK

IDENTIFICATION TABLE	
Client/Project owner	Portsmouth City Council
Project	Portsmouth Local Plan Modelling
Study	Assessment of Strategic Road Network
Type of document	Technical Note
Date	24/05/2024
Number of pages	29

APPROVAL

Version	Name		Position	Date	Modifications
1	Author	Tom Hodgson / Hazel Morton	Assistant Consultant / Associate Director	22/12/2023	Draft for PCC Comments
	Checked by	Emma Jolly	Principal Consultant	22/12/2023	
	Approved by	Hazel Morton	Associate Director	22/12/2023	
2	Author	Tom Hodgson	Assistant Consultant	24/05/2024	Responding to PCC Comments and Final pre-Regulation 19 Issue
	Checked by	Emma Jolly	Associate	24/05/2024	
	Approved by	Emma Jolly	Associate	24/05/2024	

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1. INTRODUCTION

1.1 Purpose of Technical Note

1.1.1 This technical note has been prepared by SYSTRA on behalf of Portsmouth City Council (PCC) to set out the analysis which has been undertaken in respect of the emerging Portsmouth Local Plan (LP), specifically that which concerns the expected impacts to the Strategic Road Network (SRN) which is managed by National Highways (NH). PCC acts as the Local Highway Authority (LHA) for the local road network within Portsmouth; within adjacent authority areas, the LHA is Hampshire County Council (HCC).

1.1.2 Meetings have been held with representatives of NH and PCC at the scoping stage (i.e. prior to any new technical work being undertaken) and a modelling assumptions note (dated July 2023) has been circulated and agreed to set out how the required strategic and local junction modelling will be carried out. Subsequent to this, a further meeting has been held with NH and PCC on 20th November 2023, at which the findings of the strategic modelling work for the baseline, future baseline and "do minimum" (i.e. Local Plan growth without mitigation measures) were discussed, alongside concepts and initial testing for potential mitigation at locations on the SRN where the strategic modelling data indicated that further appraisal was required.

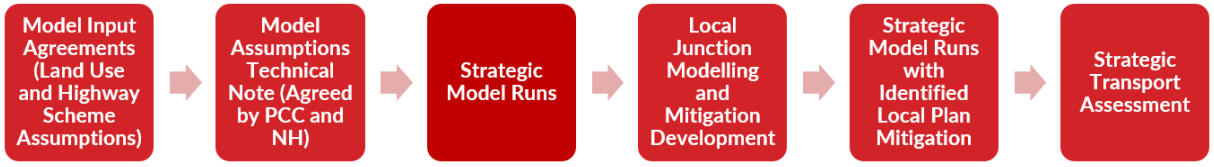
1.1.3 This technical note presents the analysis which was discussed at the meeting of 20th November; a follow-on workshop has also been held with PCC on 7th December and the current preferred options for mitigation at SRN junctions and those in close proximity to the SRN network are highlighted in this document.

1.1.4 The purpose of this technical note is to provide NH with a consolidated and targeted review of the assessments which impact the Strategic Road Network prior to an upcoming wider Regulation 19 consultation which is targeted for June 2024.

2. PROJECT OVERVIEW & CONTEXT

2.1.1 The project overview of the development of the Portsmouth Local Plan Strategic Transport Assessment is displayed in **Figure 1** below. This process runs from the initial modelling with agreed assumptions establishing the initial strategic model runs; continuing to the local junction modelling and mitigation development as agreed with Portsmouth City Council, forming the basis of the Strategic Transport Assessment.

Figure 1. Project Overview



2.1.2 The defined Strategic and Allocated Local Plan Sites are displayed in **Figure 2**, and described further in **Table 1** and **Table 2** below.

Figure 2. Strategic Local Plan Allocated Sites

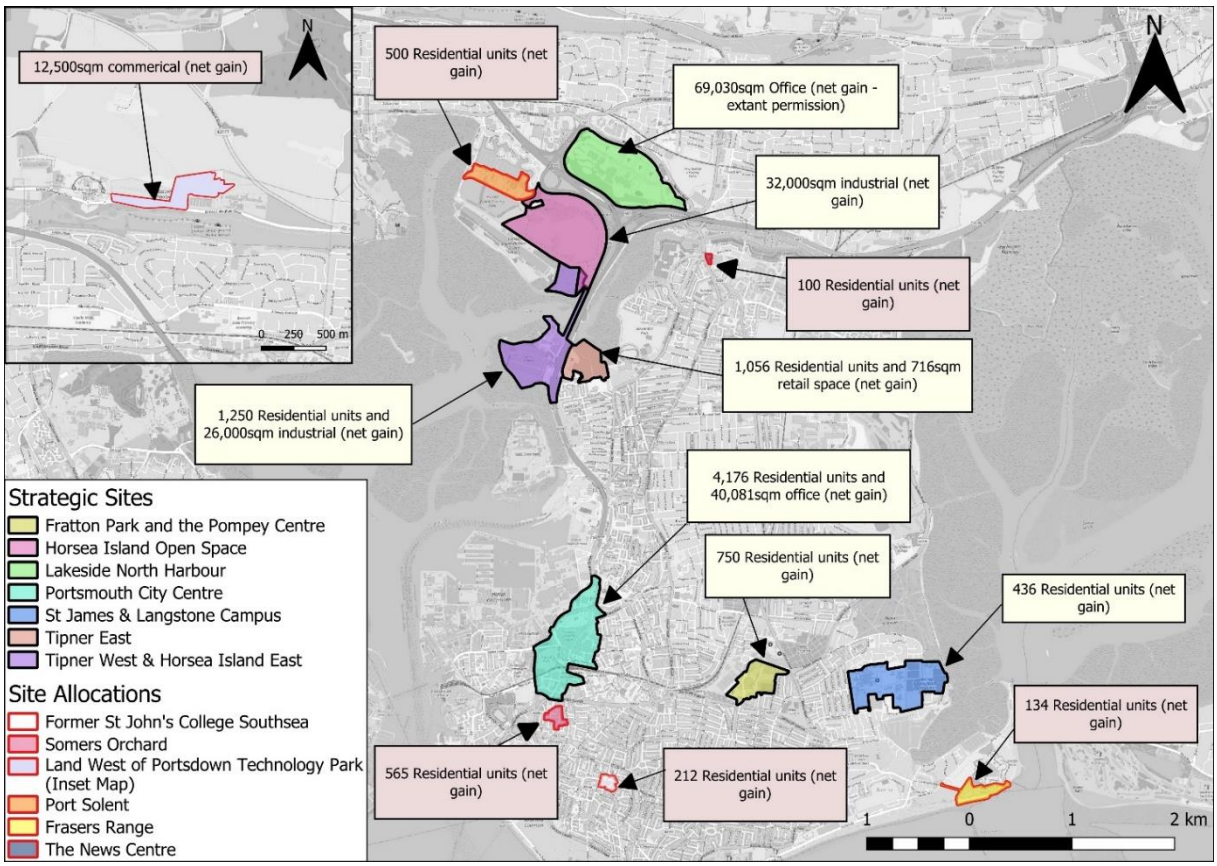


Table 1. Local Plan Strategic Sites

STRATEGIC SITE	DESCRIPTION
Tipner East	• 1,056 residential units • 716sqm commercial space • Transport hub with 2,650 car parking spaces and frequent bus services • 840sqm ancillary commercial uses at the transport hub
Tipner West and Horsea Island	• 1,250 residential units • 58,000sqm of marine employment floorspace (class E(g) offices, research and development, light industrial, B2 general industrial and B8 storage or distribution) • A bridge between Tipner West and Horsea Island East • Local shop and community facilities
Lakeside	• 50,000sqm office space (this is treated as a permission for the purposes of modelling given the extant consent, alongside an additional 19,030sqm of extant permission).
City Centre	• 4,158 residential units • 20,000m^2 Gross (1,546m^2 Net) office • City Centre Road Scheme
Fratton Park & Pompey Centre	• 710 residential units • Expanded Stadium capacity from 21,000 seats to between 26,000 and 30,000.
St James & Langstone Harbour	• 417 residential units

Table 2. Local Plan Strategic Allocations

STRATEGIC ALLOCATION	DESCRIPTION
Land West of Portsdown Technology Park	• 12,500 sqm R&D or manufacturing floorspace
Port Solent	• 500 residential units
St Johns College	• 212 residential units
Fraser Range	• 134 residential units

STRATEGIC ALLOCATION	DESCRIPTION
The News Centre	• 100 residential units (net)
Somers Orchard	• 566 residential units

2.1.3 Further information in regards to the assumptions which have been applied to the different models can be found in the 'Portsmouth Local Plan Support – Strategic Modelling Assumptions Technical Note' dated 19th July 2023.

3. SOLENT SUB-REGIONAL TRANSPORT MODEL (SRTM) OUTPUTS

3.1.1 The following chapter of the Technical Note assesses the key differences between criteria observed in the 2041 Do Minimum and Baseline Highway scenarios on the Portsmouth networks, with a particular focus on the SRN and adjacent junctions.

3.1.2 The criteria assessed comprise the following:

- Traffic Flow difference;
- Delay difference; and
- Volume/Capacity (2041 DM Scenario).

3.2 Flow Difference

3.2.1 The flow difference plots between the 2041 Baseline and 2041 Do Minimum across the AM and PM peaks are displayed in **Figure 3** and **Figure 4** below.

Figure 3. Flow Difference – AM Peak

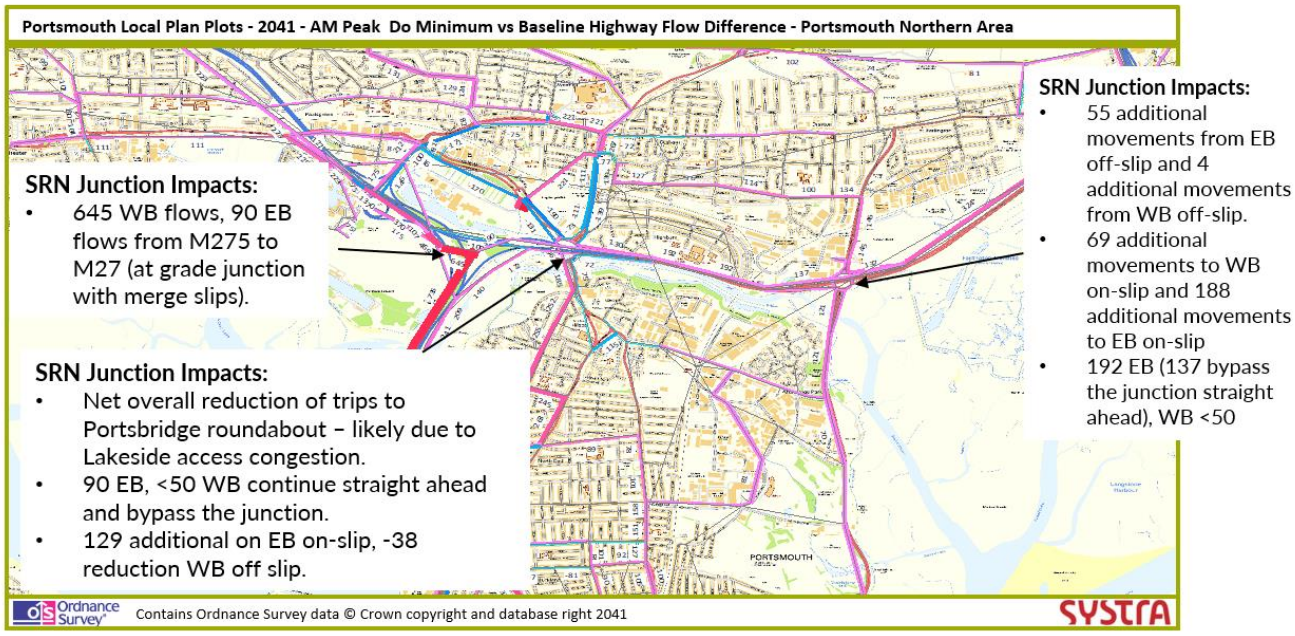
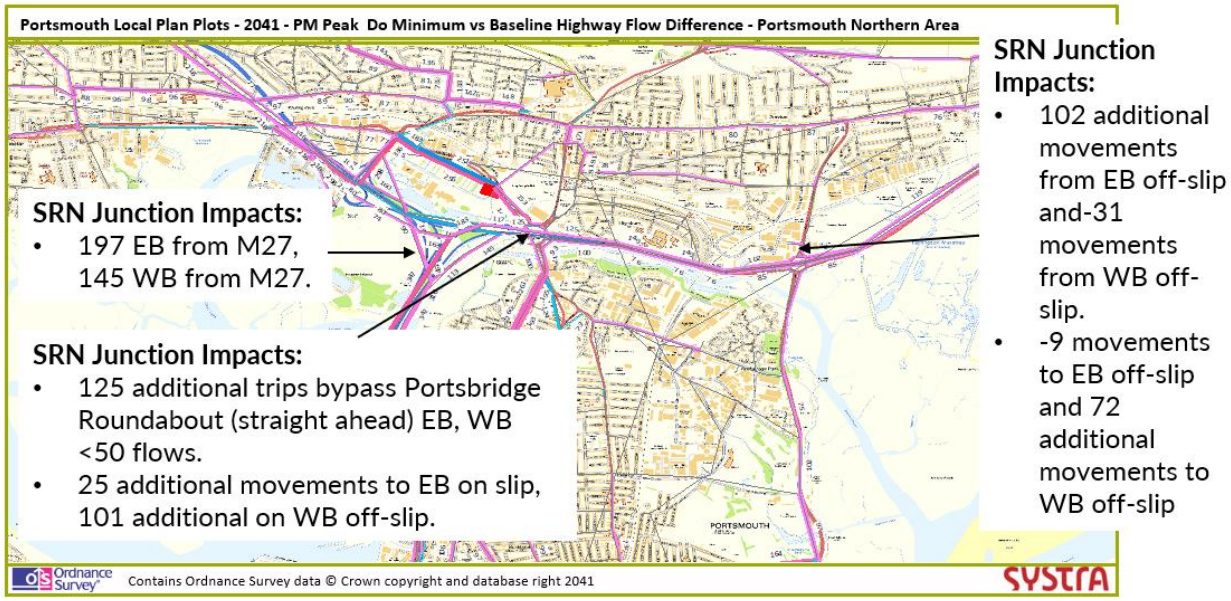


Figure 4. Flow Difference – PM Peak



3.2.2 With regards to the Strategic Road Network, it is apparent that the AM scenario sees a significant increase between the Baseline and Do Minimum scenarios west of the Rudmore Roundabout, with an increase of 645 PCUs westbound from the M275 to the M27, in comparison to an increase of 145 PCUs in the PM peak.

3.2.3 Further east, it is apparent that there is a significant increase in eastbound movements from the Havant Bypass in both the AM and PM scenarios, with an increase of 192 PCUs in the AM peak and 102 PCUs in the PM peak.

3.2.4 In the AM there is a net reduction of trips at Portsbridge Roundabout/ on A27, likely due to the congestion at the Lakeside access and therefore vehicles using the M275 and A2030 as alternatives. Additional trips are observed at the A2030 Eastern Road/Havant Bypass junction including 55 additional trips from the eastbound off-slip and 4 additional trips from the westbound off-slip. There are 69 additional trips to the westbound on-slip and 188 additional trips to the eastbound on-slip in the AM. Similalry in the PM peak, increased delay on Lakeside roundabout (107 seconds) is resulting in re-routing away from Portsbridge roundabout, due to increased congestion on the A27 Western Road southbound.

3.2.5 The AM peak also sees an increase in flows using the M275 (735 travelling northbound), largely due to the strategic sites of Tipner East and West accessed from M275 J1. In the PM peak there is minimal delay impacts on the M275, despite increases of flows.

3.2.6 Absolute traffic flow volumes and turning movements for the M27 Juncion 12 are provided in **Appendix A**, as requested by National Highways given that this junction of the SRN has not been taken forward for further assessment due to the free flowing nature of the junction with a series of merge/diverges and minimal delay impacts forecast.

3.3 Delay

3.3.1 The changes in delay between the 2041 Baseline and 2041 DM scenarios across the AM and PM peaks are displayed in **Figure 5** and **Figure 6** below.

Figure 5. Delay – AM Peak

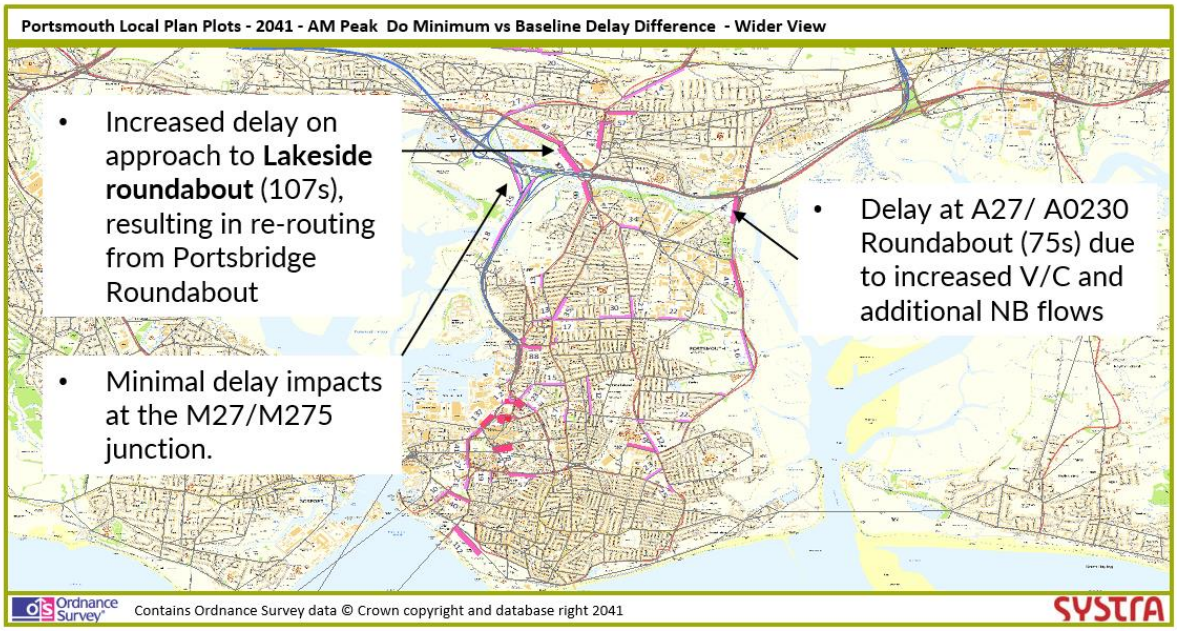
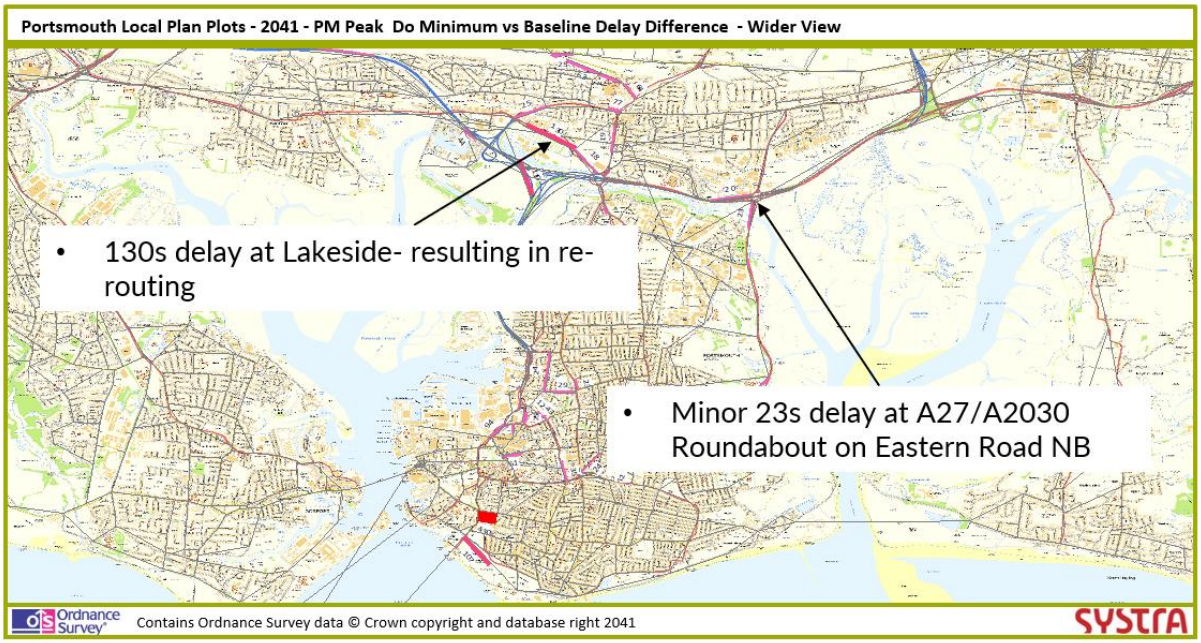


Figure 6. Delay – PM Peak



3.3.2 As indicated on the figures above, key points of delay are seen surrounding the Lakeside Roundabout, in which delay increases of up to 107 seconds occur in the AM peak, and 130 seconds in the PM peak.

3.3.3 Elsewhere, delay increases are noted to be relatively minor between the 2041 Baseline and 2041 Do Minimum scenarios however there is an increased delay of 75 seconds for vehicles travelling northbound into the A2030 Eastern Road/ Havant Bypass junction.

3.4 Volume/Capacity

3.4.1 The Volume/Capacity ratios across the Portsmouth Road network in the 2041 Do Minimum scenario are displayed in **Figure 7** and **Figure 8** below. (It is noted that these are for the links highlighted rather than the V/C figures at specific junctions). The below figures present absolute plots rather than difference plots.

Figure 7. V/C – AM Peak (2041 DM)

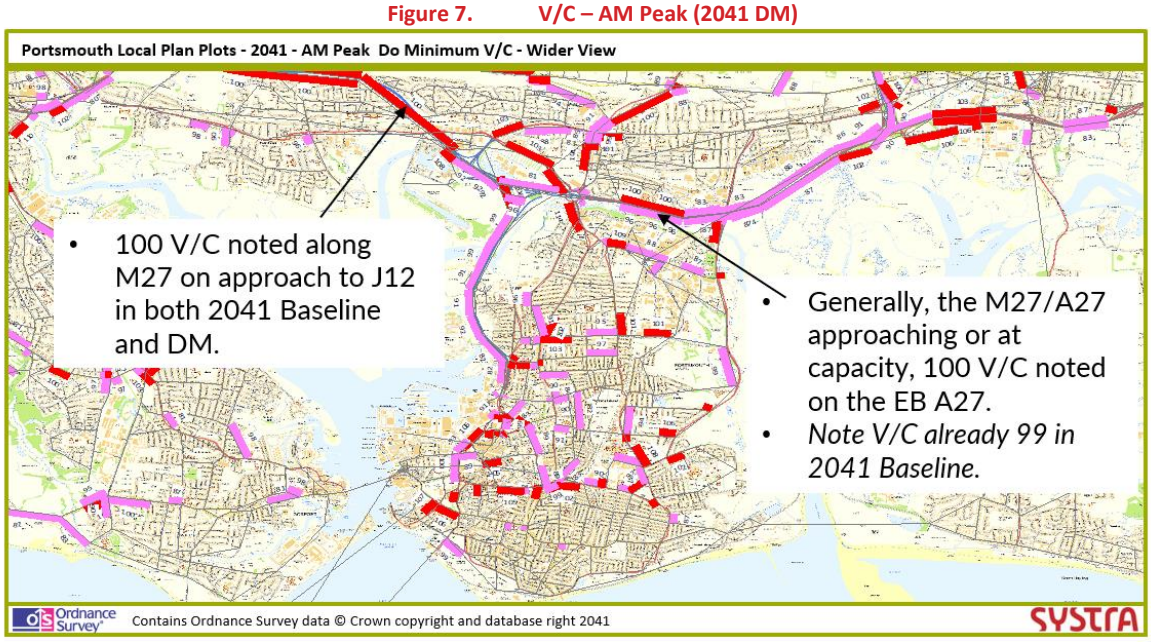
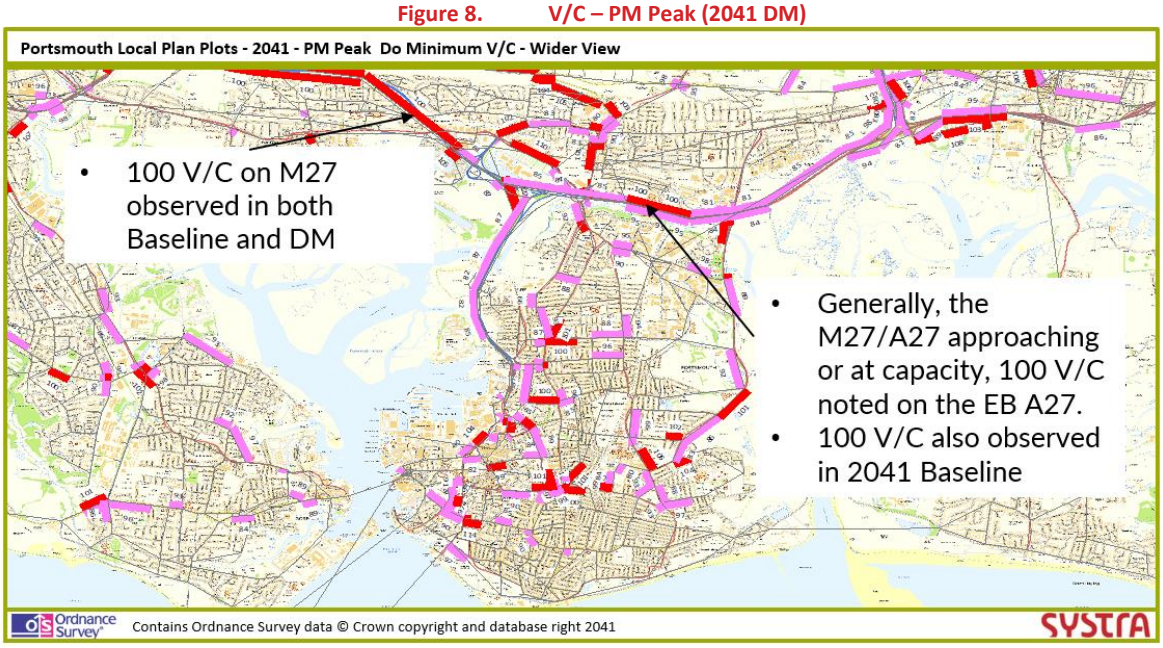


Figure 8. V/C – PM Peak (2041 DM)



3.4.2 There is no material change in V/C along the SRN mainline between the 2041 Baseline and 2041 Do Minimum scenario (M27 V/C increases from 99 to 100 in the AM with no increase in the PM). In both peaks the areas around and including Lakeside Roundabout have a Volume/Capacity of over 100% in the 2041 DM scenario.

3.4.3 In the PM, the V/C approaching Portsbridge roundabout on the A27 Western Road southbound is 110. This is attributed to the increase in flows associated with the Lakeside strategic site, and also linked to the congestion and delay observed on this link. In the 2041 Baseline, this link is operating at a 103 V/C and therefore there is an increase in V/C of 7. Similarly, the AM peak sees high V/C values of 103 denotating that this link providing access to the Lakeside development is over capacity and resulting in re-routing.

3.4.4 For the AM the V/C on the M275 increases to 99 for vehicles travelling southbound in the 2041 Do Minimum scenario, with it being 92 in the 2041 Baseline scenario. This results in a V/C increase of 7 however the SRN is still operating within capacity. The M27 is reaching 100 V/C eastbound however this was already operating at 99. The increase in V/C using the A2030 Eastern Road southbound is only 1 in both the AM and PM between the 2041 Baseline and Do Minimum.

3.4.5 The outputs demonstrate that the network is already operating close to capacity and where increases are observed on the SRN the level of increase is relatively minor.

4. LOCAL JUNCTION MODELLING METHODOLOGY

4.1.1 Based on the SRTM results, junctions for further consideration have been classified as experiencing either a “severe” or “significant” impact in the 2041 Do Minimum scenario (with Local Plan growth), based on the following criteria – the junctions have to meet all the stated criteria to be classified as severe or significant. Severe junctions will be those taken forward for further investigation and potential mitigation.

- **Severe**: Volume/Capacity >95%; and Difference between the Do Minimum and Baseline V/C of at least 10%; and
- **Significant**: Volume/Capacity >85%; and Difference between the Do Minimum and Baseline V/C of at least 5%.

4.1.2 Based on this and any clarifications regarding the impacts of severity (i.e. If any junctions are particularly close to LP development sites), the Portsbridge Roundabout & A27/A2030 Roundabout were noted as falling into the severe category.

4.1.3 Portsbridge Roundabout was only classed as ‘significant’ but upgraded to severe on the basis of its proximity to the Lakeside strategic site and possible impacts of re-routing from other junctions to avoid delay, such as the Lakeside Roundabout which only provides a single access to the Lakeside development in the Do Minimum Scenario. The Local Plan mitigation of a secondary Lakeside access and safety improvements at Spur Road could result in further re-routing and therefore it was felt that testing of mitigation measures at Portsbridge Roundabout was necessary.

4.1.4 It is noted that Tipner Interchange (M275 J1) is not included as a severe junction as only one arm (SB off-slip) has a V/C over 100% (101%) with other arms having significant capacity available in the 2041 Do Minimum scenario. Queue lengths on the slip roads have also been specifically considered as it is recognised that there can potentially be an increase in risk of collisions even if the queues do not fully extend to the end of the slip lane. The queues are noted to be longest on the Southbound off-slip, where the average queue length on the SB off-slip is 27m, with 190m of additional stacking space available; although the mean maximum and absolute maximum queues will be longer in practice, it is considered that there will remain sufficient space on the slip to allow vehicles to decelerate from the main line and join the queue safely.

5. PORTSBRIDGE ROUNDABOUT

5.1 Existing Layout

5.1.1 As previously discussed, Portsbridge Roundabout is defined as experiencing a severe impact as a result of Local Plan traffic growth in the 2041 Do Minimum scenario. The existing four-arm unsignalized roundabout is displayed in **Figure 9** below.

Figure 9. Portsbridge Roundabout Existing Layout

5.1.2 Local junction modelling of the Portsbridge roundabout has been undertaken in Junctions 10, with model results for the existing layout presented in **Table 3** below.

Table 3. Portsbridge Roundabout Existing Layout Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2019 Base						
A – Northern Rd A397 N	17.6	42.60	0.96	17.9	39.47	0.96
B – M27 WB Off Slip	25.4	59.88	0.99	26.6	61.46	1.00
C – London Rd A3	5.1	9.20	0.82	3.0	5.67	0.73
D – Western Rd A27 N	52.4	132.18	1.07	225.4	519.68	1.33
2041 Baseline						
A – Northern Rd A397 N	15.3	36.81	0.95	10.1	23.81	0.91
B – M27 WB Off Slip	75.7	146.00	1.09	153.9	338.97	1.21
C – London Rd A3	7.7	12.91	0.88	3.3	5.64	0.75
D – Western Rd A27 N	97.9	240.90	1.16	431.5	989.34	1.51
2041 Do Minimum						
A – Northern Rd A397 N	10.6	27.68	0.92	12.1	28.03	0.93
B – M27 WB Off Slip	32.4	70.39	1.01	226.4	547.37	1.32
C – London Rd A3	16.1	25.35	0.95	3.9	6.26	0.78
D – Western Rd A27 N	80.2	231.86	1.16	518.3	1118.90	1.55

5.1.3 As can be observed from the above information, the M27 Westbound off-slip and Western Road A27 both operate above 100% RFC in the Baseline and Do Minimum scenarios, with the highest level of queue and delay incurred in the PM peak.

5.1.4 It is noted that 447m (77 PCUs) of stacking space is available on the M27 WB off-slip; the 2041 Baseline records a corresponding queue length of 154 PCUs, whilst the Do Minimum scenario figure is 226 PCUs– an increase of 72 PCUs. This forecasts that the M27 WB off-slip stacking space will already be exceeded in the 2041 Baseline due to background growth, as well as in the 2041 Do Minimum scenario when Local Plan traffic is factored.

5.2 Mitigation Options

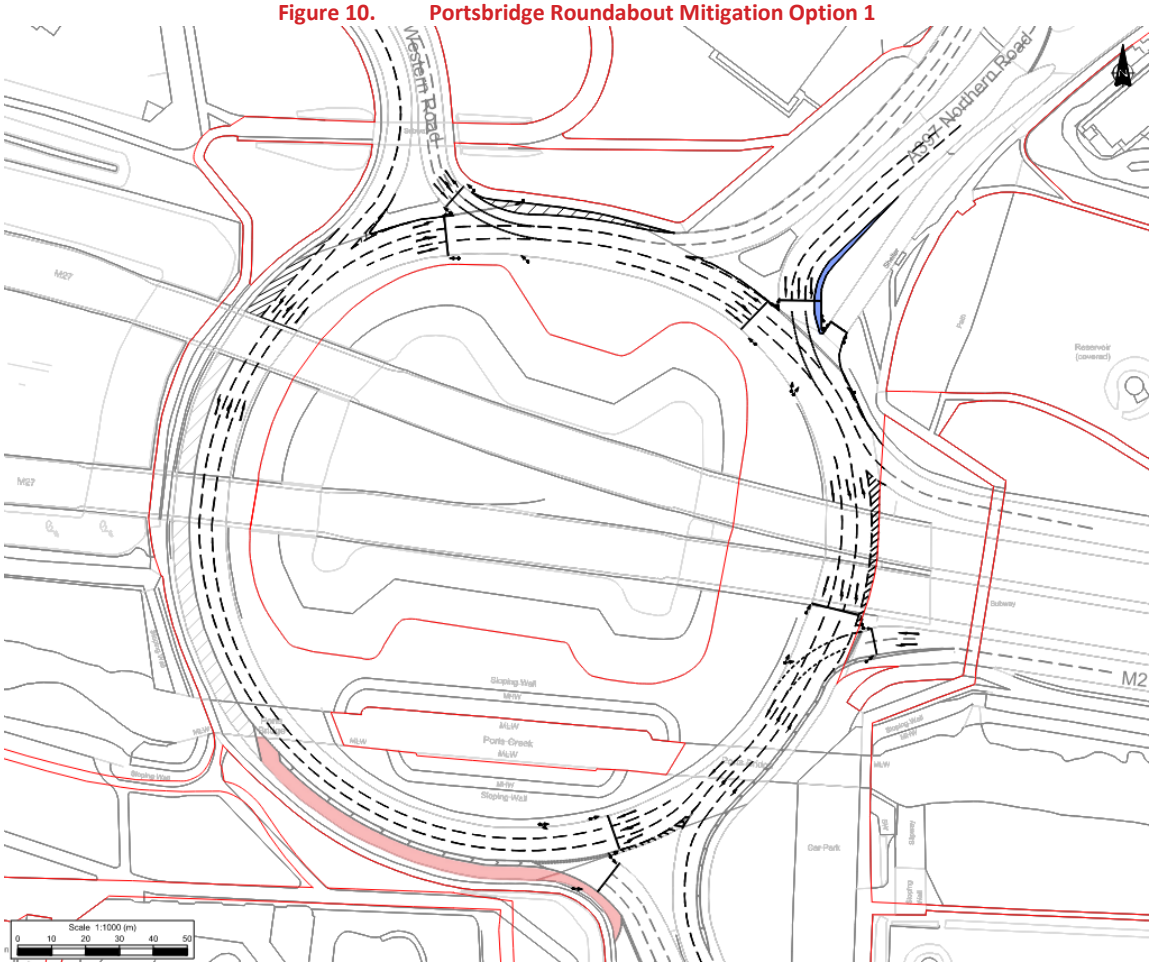
5.2.1 Following the assessment of the performance of the existing Portsbridge Roundabout, a series of mitigations have been investigated. It is noted that significant previous work has been undertaken by PCC and NH to examine potential upgrades for the junction; the option testing undertaken specifically for the Local Plan includes variants of options previously considered, as well as options which were discussed in principle but not examined in detail by earlier exercises as part of the Transforming Cities Fund package of works. It should be noted that the 2041 Do Minimum flows have been tested through these junction models.

Option 1

5.2.2 The first option considered for the Portsbridge Roundabout involves the signalisation of all arms and opposing the circulatory. Other features of this mitigation include:

- MMQ of up to 56.5 PCUs on M27 WB off-slip which would fit within the stacking space available;
- 2041 DM PM MMQs of up to 22 PCUs on Northern Road available in order to prevent circulatory stacking space being exceeded; and
- 45 second cycle time used within the model (optimum cycle time as determined by cycle time optimiser function).

Figure 10. Portsbridge Roundabout Mitigation Option 1



5.2.3 The results from this option have been assessed in LinSig and are presented in **Table 4** below.

Table 4. Portsbridge Roundabout Mitigation Option 1 Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Mean Max Queue (PCU)	Delay (s/PCU)	DoS	Mean Max Queue (PCU)	Delay (s/PCU)	DoS
2041 Do Minimum						
A – Northern Rd A397 N	22.2	114.4	103.8%	32.1	115.1	103.5%
B – M27 WB Off Slip	56.5	191.1	109.2%	35.6	152.7	105.9%
C – London Rd A3	12.7	29.2	96.0%	8.8	12.5	75.7%
D – Western Rd A27 N	7.4	34.1	83.0%	22.0	83.4	100.1%

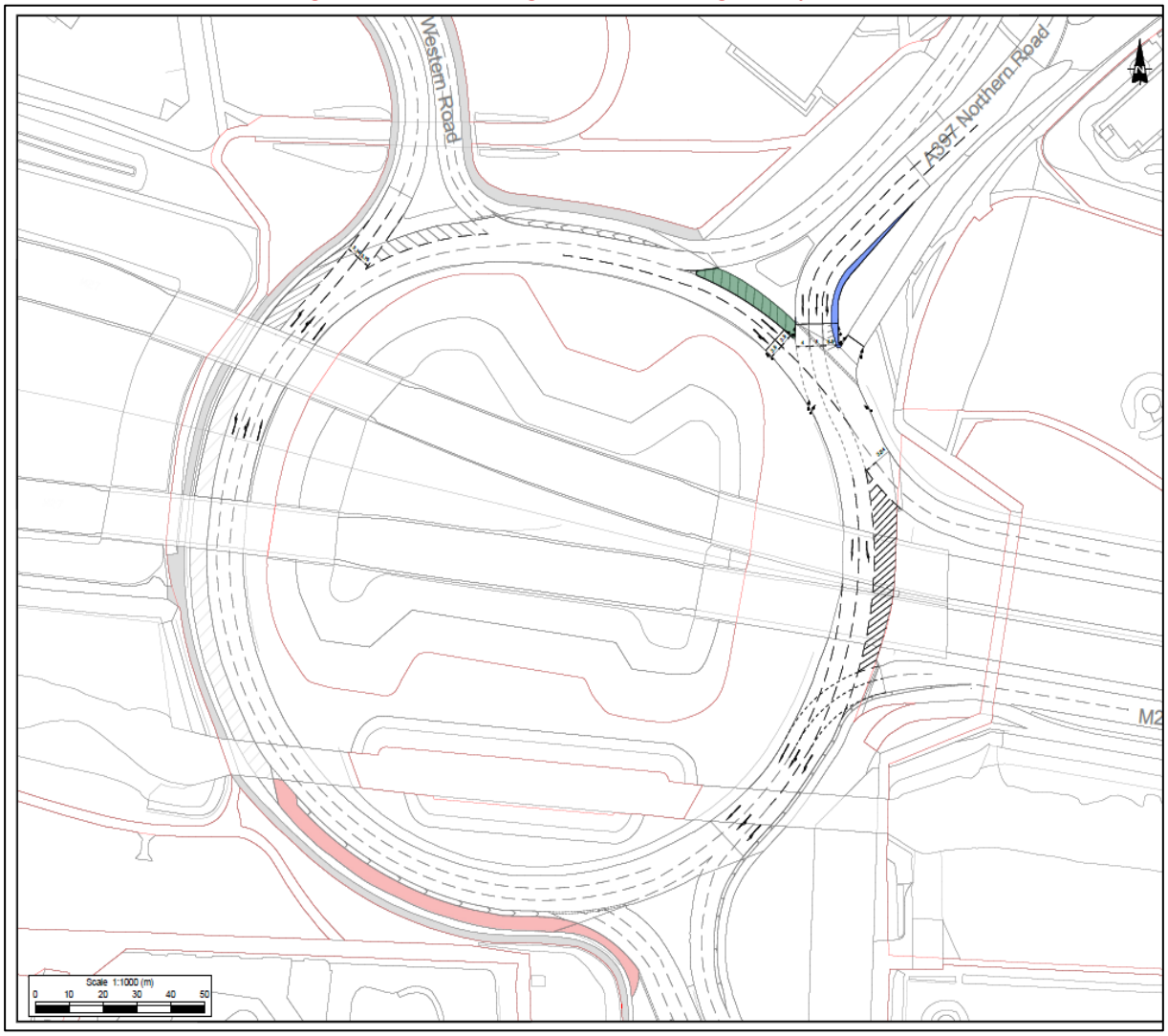
5.2.4 As a result of this Option, queue lengths are seen to extend to the physical limits of the model on the eastern circulatory, with traffic held back on approach arms. Additionally, queue lengths exceed stacking space by 1.5 PCUs on the NW circulatory (opposite Western Road arm). The DoS on the M27 slip road exceeds 100% theoretical capacity, reaching 109% in the AM peak. It is therefore considered that this option is not suitable as mitigation for the expected Local Plan impacts.

Option 2

5.2.5 A further considered option for the Portsbridge Roundabout is the signalisation of the A397 Northern Road arm, bus gate and opposing circulatory. Other features of this mitigation include:

- 45 second cycle time used within the model (optimum cycle time as determined by cycle time optimiser function).
- It is assumed that the Bus gate is called every other cycle.

Figure 11. Portsbridge Roundabout Mitigation Option 2



5.2.6 The results of the modelling of this mitigation option are presented in **Table 5** below.

Table 5. Portsbridge Roundabout Mitigation Option 2 Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	DoS	Queue (PCU)	Delay (s)	DoS
2041 Do Minimum						
A – Northern Rd A397 N	29.0	103.4	106.5%	58.0	222.2	111.4%
B – M27 WB Off Slip	1.9	2.1	43.9%	2.3	3.4	49.2%
C – London Rd A3	0.2	1.0	31.4%	0.2	0.8	28.4%
D – Western Rd A27 N	1.1	8.8	69.5%	1.5	8.0	75.7%

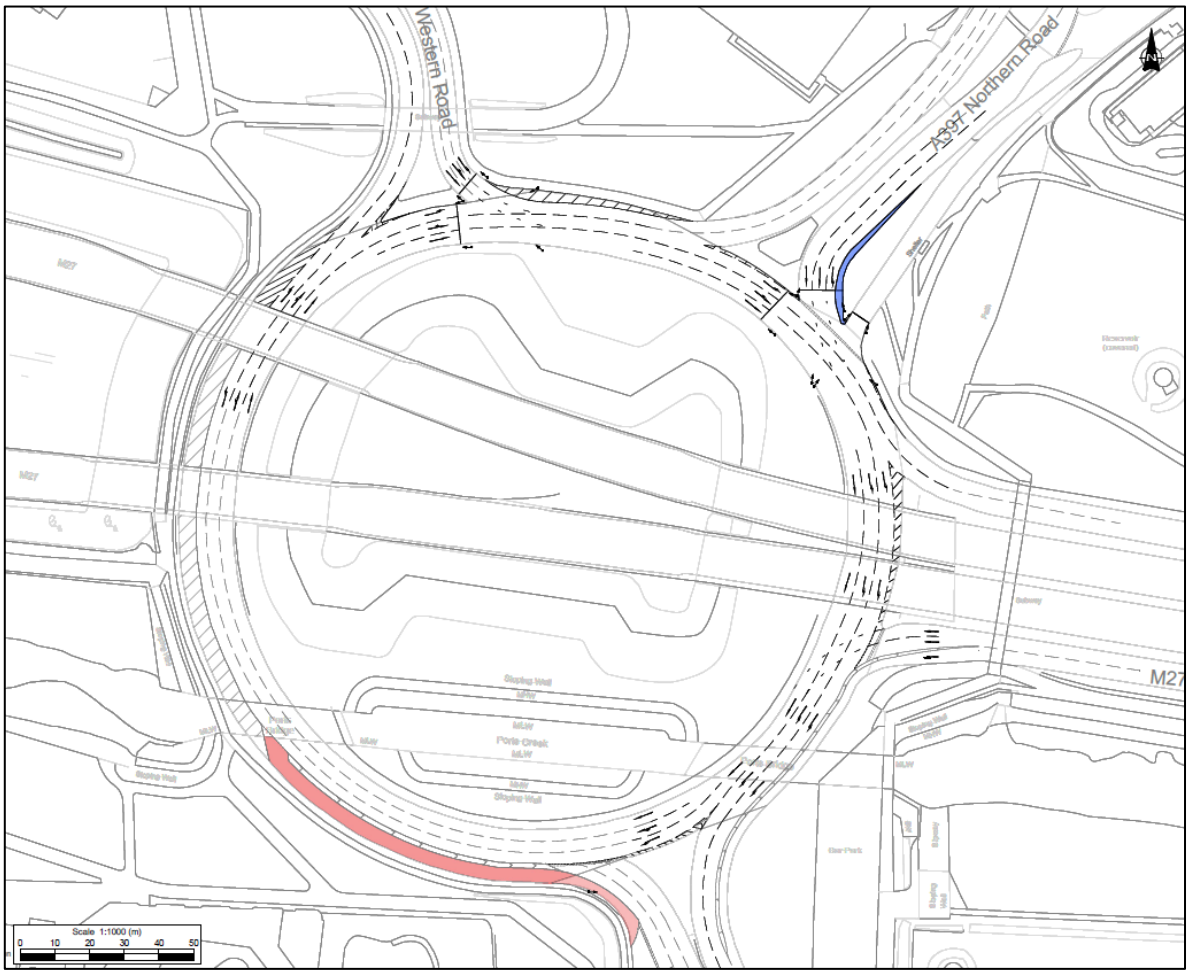
5.2.7 The model results show that the A397 Northern Road arm exceeds capacity with high levels of queuing and delay incurred with a DoS of 106% in the AM peak and 111% in the PM peak, resulting in a 29 and 58 PCU queue in the AM and PM peak respectively. The signal phasing timings hold traffic back on the A397 Northern Road arms in order to constrain the internal circulatory queuing to within an appropriate level for the available stacking space. The level of queues observed would block back past the give-way junction with Portsmouth Road in the PM peak, however at other times of day the levels of queuing are unlikely to impact the operation of this junction. It is observed that queueing past the give way junction occurs regularly in the existing layout of the junction, and therefore the proposals do not make this situation significantly worse.

Option 3

5.2.8 The third option (**Figure 12**) considered as potential mitigation for the observed impacts is the signalisation of both the Northern Road and Western Road arms. Features of this mitigation include:

- Signalisation of A397 Northern Road arm, bus gate and opposing circulatory.
- Signalisation of Western Road arm and opposing circulatory.
- Removal of the left turn slip from A27 Western Road to help provide additional internal circulatory capacity.
- Creates enough gaps for M27 WB off slip to not be congested.
- 45 second cycle time used within the model (optimum cycle time as determined by cycle time optimiser function).
- It is assumed that the Bus gate is called every other cycle.

Figure 12. Portsbridge Roundabout Mitigation Option 3



5.2.9 The results of the modelling of this mitigation option are presented in **Table 6** below.

Table 6. Portsbridge Roundabout Mitigation Option 3 Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	MMQ (PCU)	Delay (s/PCU)	DoS	MMQ (PCU)	Delay (s/PCU)	DoS
2041 Do Minimum						
A – Northern Rd A397 N	11.0	46.5	97.9%	15.4	52.0	95.5%
B – M27 WB Off Slip	3.3	3.7	56.7%	3.1	5.2	56.1%
C – London Rd A3	1.2	3.1	70.1%	1.5	3.6	74.9%
D – Western Rd A27 N	25.3	198.2	106.7%	19.9	86.2	99.0%

5.2.10 The results of option 3 indicate that the Western Road arm would operate over-capacity in the AM peak, and very close to capacity in the PM peak, with a DoS of 106% and 99% and a queue of 25 PCUs and 20 PCUs respectively. However, in comparison to option 2, there is significantly more space available for queuing on the Western Road arm compared to the Northern Road arm where the highest queues are incurred in Option 2 (stacking capacity c.360 metres vs. 100 metres) and as such this proposed arrangement would result in the longest expected queues and delays occurring in the location where they are best able to be accommodated without having knock in impacts on adjacent junctions as well as better balancing the queues between A397 Northern Road and A27

Western Road. The M27 WB off-slip operates well within capacity with limited queues observed in both the AM and PM peak periods.

5.2.11 Given the overall volume of traffic which is served, and the need to protect the M27 off-slip from excessive queuing to maintain a safe operation of the slip road, Option 3 has been selected as the preferred mitigation for Portsbridge Roundabout and therefore taken forward for testing as part of the "Do Something" strategic model run.

5.2.12 The Proposed Mitigation Drawing for Option 3 is shown in Drawing GB01T23C11-dwg-100-02.5 in **Appendix B**.

6. A27 HAVANT BYPASS / A2030 EASTERN ROAD ROUNDABOUT

6.1 Existing Layout

6.1.1 A further junction which has been identified as meeting the criteria for a severe impact in the Do Minimum scenario is the A27 / A2030 Havant Bypass. The existing layout is displayed in **Figure 13** below.

Figure 13. A27/A2030 Havant Bypass Existing Layout

6.1.2 The results of the junction modelling exercises are displayed in **Table 7** below.

Table 7. A27/A2030 Havant Bypass Model Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	Degree of Saturation (%)	Queue (PCU)	Delay (s)	Degree of Saturation (%)
2019 Base						
A – A2030 Eastern Road N	10.2	23.9	73.8%	13.1	21.7	79.0%
B – A27 WB Off Slip	16.4	21.8	88.8%	6.0	14.4	61.7%
C – A2030 Eastern Road S (11)	125.7	292.2	116.4%	39.7	58.0	99.7%
D – A27 EB Off Slip (12)	24.0	48.2	96.4%	11.1	20.1	75.2%
2041 Baseline						
A – A2030 Eastern Road N	13.0	29.2%	83.4%	16.9	32.1	89.3%
B – A27 WB Off Slip	14.6	19.5	86.8%	7.3	15.9	70.4%
C – A2030 Eastern Road S (11)	276.0	568.5	140.7%	133.0	279.9	115.8%
D – A27 EB Off Slip (12)	37.2	89.4	101.6%	12.8	25.6	82.4%
2041 Do Minimum						
A – A2030 Eastern Road N	15.8	36.7	89.9%	15.5	28.9	86.6%
B – A27 WB Off Slip	14.4	19.3	86.6%	7.1	15.7	69.2%
C – A2030 Eastern Road S (11)	355.7	710.7	157.3%	177.9	387.2	124.0%
D – A27 EB Off Slip (12)	43.2	109.7	103.2%	12.0	24.0	79.8%

6.1.3 Whilst mitigation has been considered for the Havant Bypass junction, a number of limitations associated with the surrounding bridge width and associated constraints including the subsequent funding required and structural limitations are significant to the extent of creating difficulty in any form of physical mitigation. Additionally, it can be seen that the junction operates with significant congestion issues already in the 2019 Baseline year, particularly on the Eastern Road arm.

6.1.4 Any mitigation on the Eastern Rd arm where the highest congestion occurs is particularly challenging due to the bridge width and associated land constraints. The impact on congestion through the junction is more significant for the background growth to 2041 rather than the LP traffic growth, which results in comparatively minor increases in traffic flow.

6.1.5 The results show the following:

- 2019 Base Scenario:
  - The A27 westbound off-slip arm and the A27 eastbound off-slip arm are both nearing capacity in the AM peak with a DoS of 88.8% and 96.4% respectively.
  - The A2030 Eastern Road South arm is operating over capacity in the AM peak with a DoS of 116.4%, resulting in a queue of 125.7 PCUs (723m). There is 950m of stacking space available, therefore this level of queueing can be accommodated.
- 2041 Baseline:
  - In the PM peak, the A2030 Eastern Road North arm is nearing capacity in the PM peak with a DoS of 89.3%.
  - In the AM peak, the A27 westbound off-slip is nearing capacity with a DoS of 86.8%.
  - The A2030 Eastern Road South arm is operating over capacity with an AM DoS of 140.7% resulting in a queue of 276 PCUs (1587m). These exceeds the 950m worth of stacking space available. In the PM peak, it is operating over capacity with a DoS of 115.8% resulting in a queue of 113 PCUs (650m).
  - The A27 eastbound off-slip arm is operating over capacity in the AM peak with a DoS of 101.6%, resulting in a queue of 37.2 PCUs (214m). There is 379m worth of stacking space therefore the queue can be accommodated.
- 2041 Do Minimum:
  - The A2030 Eastern Road North arm is nearing capacity with a DoS of 89.9% and 86.6% in the AM and PM peaks respectively.
  - The A27 westbound off-slip is nearing capacity with a DoS of 86.6% in the AM peak.
  - The A2030 Eastern Road South arm is operating over capacity with an AM DoS of 157.3% and a PM peak of 124.0%, which result in a queue of 355.7 PCUs (2045m) and 177.9 PCUs respectively (1023m). This exceeds the 950m worth of stacking space present to the next major junction.
  - A A27 eastbound off-slip is operating over capacity in the AM peak with a DoS of 103.2% and 43.2 PCUs (248m) worth of queueing. This can be accommodated within the 500m of stacking space available.

6.1.6 The results identify that three arms are either reaching near capacity or operating over capacity in both the AM and PM peaks in the 2041 Baseline scenario. For the A2030 Eastern Road South arm, the DoS increases by 16.6% in the AM peak and 8.2% in the PM peak between the 2041 Baseline and 2041 Do Minimum scenario. It is of note that this arm however already operates over capacity in the 2019 Base scenario.

6.1.7 Furthermore, the queueing on the SRN can be accommodated in the stacking space available for both the eastbound and westbound off-slips in all scenarios. Therefore, it is not considered that the level of targeted growth would impact the safe and efficient operation of the off-slips from the A27. The highest levels of congestion are noted on the local road network on the A2030 Eastern Road south arm which experiences significant congestion in the 2041 Baseline alongside the 2041 Do Minimum scenario.

6.1.8 SYSTRA note congestion increases on the Eastern Road arm between the Baseline and Do Minimum scenarios; any mitigation on this arm is particularly challenging due to the bridge width and associated land constraints.

6.1.9 There are no clear mitigation options to be considered at this junction, due to the junction already operating above capacity in the 2019 Base and 2041 Baseline, therefore congestion is more significantly associated with background growth rather than Local Plan growth (it is still acknowledged that the Local Plan increases the DoS on a number of arms, however the rate of increase is less than background traffic growth).

6.1.10 On the basis of the constrained nature of the junction with the bridge width limiting potential improvements, as well as the fact that the junction is already operating with high queues in the 2041 Baseline, no additional physical mitigation at this location is being considered to form part of the Local Plan proposals. However, wider planned measures to increase the use of public transport are expected to reduce some demand on the SRN and on traffic travelling north/south into and out of the city.

7. ADJACENT JUNCTIONS

7.1 Lakeside Roundabout

7.1.1 To the northwest of the Portsbridge Roundabout, a further junction considered for mitigation is the Lakeside Roundabout (A27 Western Road/ Lakeside Access), with associated access to the Lakeside Strategic Site for further office development. As has been shown in the strategic modelling plots, significant congestion and delay is expected to occur in this location, which will directly affect route choices and potentially distribution of traffic at the Portsbridge roundabout. Being able to make improvements to this situation is expected to benefit both the Lakeside Roundabout itself and compound the benefits of the proposed Portsbridge Roundabout mitigation.

7.1.2 For clarity, we do not expect that improvements at Lakeside in isolation would remove the need for mitigation at Portsbridge, but the timing for the Portsbridge scheme could be influenced by what is done at the Lakeside junction.

7.1.3 The existing layout of the junction is displayed in **Figure 14** below, with model results in **Table 8**.

Figure 14. Lakeside Roundabout Existing Layout

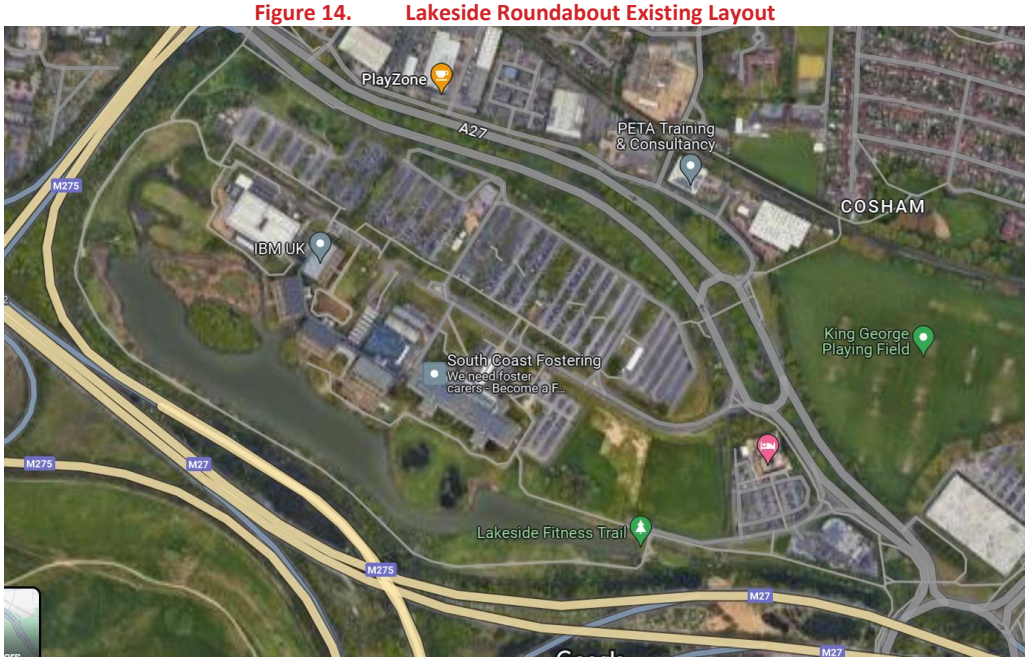


Table 8. Lakeside Roundabout Existing Layout Model Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2019 Base						
A – A27 Western Road N	2.7	5.93	0.71	3.0	6.70	0.73
B – Northarbour Road	0.0	0.00	0.00	0.0	0.00	0.00
C – A27 Western Road S	2.6	5.89	0.69	1.4	3.65	0.56
D – Lakeside Access	0.7	6.32	0.32	1.2	4.96	0.50
2041 Baseline						
A – A27 Western Road N	5.5	10.26	0.85	5.2	11.38	0.83
B – Northarbour Road	0.0	7.50	0.01	0.1	7.10	0.07
C – A27 Western Road S	4.0	8.96	0.80	1.7	4.13	0.60
D – Lakeside Access	0.7	4.81	0.38	5.6	14.80	0.84
2041 Do Minimum						
A – A27 Western Road N	8.4	16.10	0.88	3.7	9.68	0.77
B – Northarbour Road	0.8	12.11	0.46	0.2	7.93	0.17
C – A27 Western Road S	11.1	28.33	0.92	3.2	6.94	0.75
D – Lakeside Access	1.7	6.95	0.58	483.1	854.66	1.43

7.1.4 A secondary access has been identified as a strong potential mitigation option, with the aim of positively influencing the distribution of vehicle flows both accessing and exiting the development site, with capacity issues observed particularly in relation to the existing site access in the 2041 Do Minimum PM scenario.

7.1.5 A potential mitigation option has therefore been considered which would create a secondary access to the northwest of the Lakeside Site, accessible from Western Road, in manner similar to that previously associated with outline planning application 16/00416/FUL (**Figure 15**). This will be left turn exit/ entry only, and within the modelling assumptions, all traffic turning left out of the Site onto Western Road has been reassigned to use the proposed access. Initial modelling results at the existing Lakeside access with appropriate flows re-routed to a secondary access are displayed in **Table 9**.

Figure 15. Proposed Lakeside Access (Planning Application 1600416FUL)

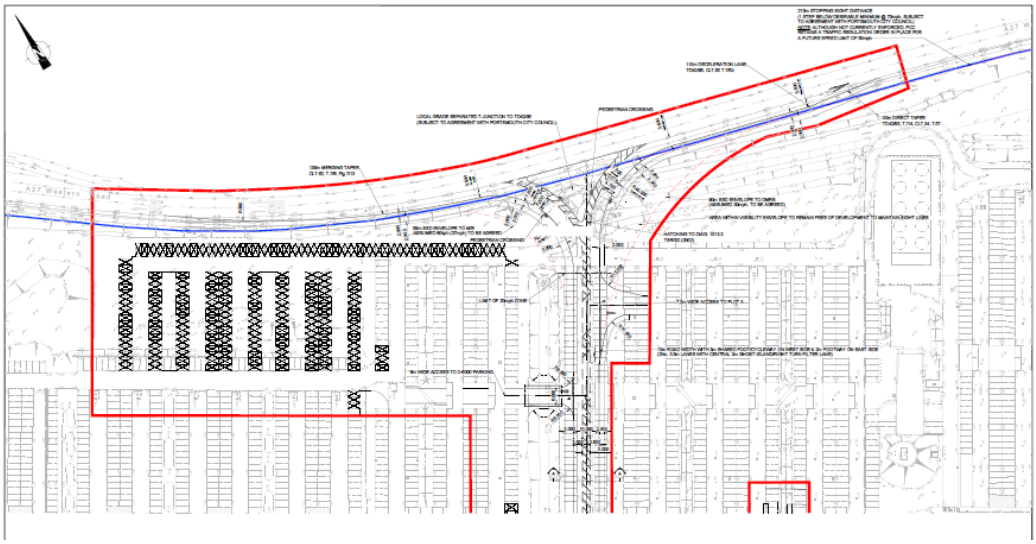


Table 9. Proposed Lakeside Access Model Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2041 Do Minimum						
A – A27 Western Road N	8.4	16.07	0.88	9.3	25.12	0.90
B – Northarbour Road	0.8	12.10	0.46	0.4	16.02	0.29
C – A27 Western Road S	11.2	28.44	0.92	1.0	3.46	0.48
D – Lakeside Access	0.4	3.74	0.25	3.1	8.53	0.76

7.1.6 As is evident from the results above, whilst the proposed mitigation increases congestion on Western Road North in the 2041 Do Minimum PM scenario, it is still within capacity at an RFC of 0.90, and the Lakeside Access itself is significantly reduced in RFC to 0.76.

7.1.7 As noted above, signalisation of the A397 Northern Road arm, bus gate and opposing circulatory on Portsbridge Roundabout will further regulate additional flows from Lakeside Roundabout, without causing queuing onto the WB off-slip.

7.2 Rudmore Roundabout

7.2.1 The Rudmore Roundabout has also been investigated for potential mitigation options, based on the data obtained from the strategic modelling exercises. The existing layout of the junction is seen in **Figure 16** below, with model results displayed in **Table 10**.

Figure 16. Rudmore Roundabout Existing Layout

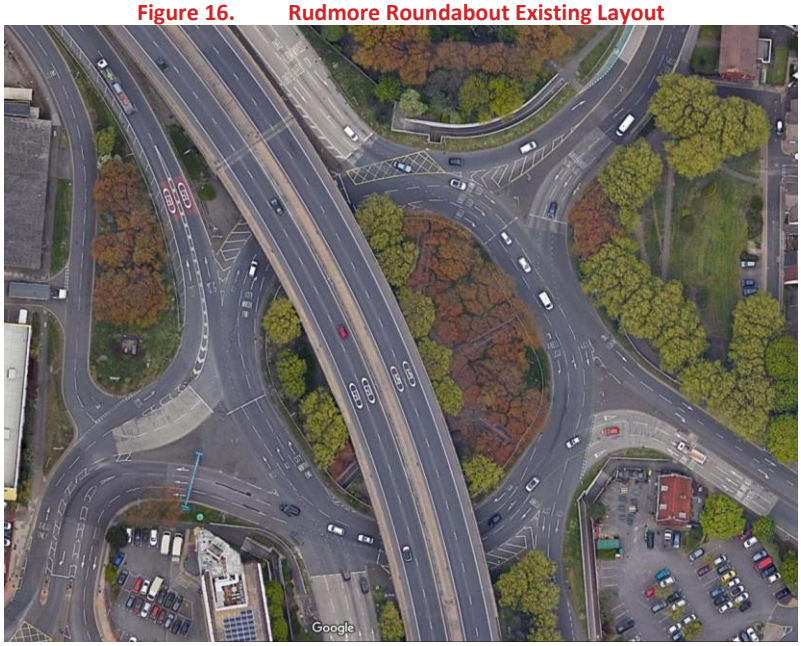


Table 10. Rudmore Roundabout Existing Layout Model Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	Degree of Saturation (%)	Queue (PCU)	Delay (s)	Degree of Saturation (%)
2019 Base						
A – M275 SB Off-Slip	15.1	41.4	88.0%	7.3	11.0	47.8%
B – Stamshaw Road	9.9	44.9	87.4%	3.8	32.3	58.5%
C – Kingston Crescent	46.2	85.6	100.5%	1.7	6.2	56.2%
D – A3 Mile End Road	0.7	32.1	14.3%	3.6	34.2	50.9%
E – Wharf Road	3.8	35.7	53.6%	5.0	30.9	56.6%
2041 Baseline						
A – M275 SB Off-Slip	10.8	9.2	62.4%	13.2	17.0	70.7%
B – Stamshaw Road	13.1	30.6	84.7%	7.5	60.0	88.6%
C – Kingston Crescent	68.4	328.6	117.9%	8.0	21.9	85.2%
D – A3 Mile End Road	1.1	32.7	21.5%	6.8	33.5	68.3%
E – Wharf Road	5.3	40.0	67.3%	5.4	33.3	63.1%
2041 Do Minimum						
A – M275 SB Off-Slip	11.4	10.0	64.0%	18.8	34.9	89.2%
B – Stamshaw Road	11.0	19.2	68.7%	8.2	61.5	90.1%
C – Kingston Crescent	68.7	307.9	116.6%	48.5	107.9	102.3%
D – A3 Mile End Road	1.1	33.5	22.3%	7.3	33.1	69.0%
E – Wharf Road	4.7	32.1	56.6%	6.0	42.6	74.8%

7.2.2 As is evident from the modelling results, Kingston Crescent is observed to be significantly over capacity across all AM scenarios, with delays of up to 328.6 seconds. As a result, the internal circulatory significantly exceeds available stacking space across the modelled 2041 scenarios.

7.2.3 As a potential mitigation option, signalisation of Kingston Crescent and the associated circulatory has been investigated. The model results from the proposed mitigation scheme are displayed in **Table 11** below.

Table 11. Rudmore Roundabout Mitigation Results

	AM (08:00-09:00)			PM (17:00-18:00)		
	Queue (PCU)	Delay (s)	Degree of Saturation (%)	Queue (PCU)	Delay (s)	Degree of Saturation (%)
2041 Do Minimum						
A – M275 SB Off-Slip	13.1	10.1	61.4%	19.7	28.3	80.0%
B – Stamshaw Road	23.5	42.4	90.2%	9.8	41.9	72.9%
C – Kingston Crescent	28.2	158.5	103.7%	16.5	41.6	84.5%
D – A3 Mile End Road	1.4	48.9	27.6%	9.7	45.3	76.4%
E – Wharf Road	7.7	56.9	77.6%	7.4	46.2	70.7%

7.2.4 As is evident from the model results, the Degree of Saturation on the Kingston Crescent arm has reduced to be within capacity in the 2041 PM scenario, however this is still slightly over capacity in the 2041 AM scenario, at 103.7%. This nevertheless represents a significant improvement on the existing layout, as the capacity is better balanced across Stamshaw Road and Kingston Crescent. It is recognised that Stamshaw Road is a significant bus corridor and therefore any mitigation at this roundabout requires consideration of wider bus journey times.

8. DO SOMETHING SRTM RESULTS

8.1 Overview

8.1.1 This chapter provides an overview of the results of the 2041 Do Something SRTM run, with a focus on the above mitigations identified in Chapter 7 above which interact with the SRN. This Do Something run allows traffic distribution across the whole of the Portsmouth network to be analysed, to consider the impacts of vehicle re-routing with mitigations in place. The commentary below focuses on the impacts specific to the SRN junctions and the immediate approach routes.

8.1.2 The series of figures below show data plots which forecast the future operation of the highway network with the Local Plan growth and identified mitigation in place.

8.1.3 Flow difference plots between the Do Minimum (2041) and Do Something (2041) scenarios comprise the following:

- Link Flows – presents the additional traffic flows in Passenger Car Units (PCU) along each link of the network (increase of 50 vehicles or more presented)
- Additional Delay incurred along each link of the network (seconds) (increase of 10 seconds or more presented)

8.1.4 By examining this data it is possible to identify how traffic patterns are expected to change based on mitigations proposed, compared to just Local Plan development. The pink lines on the plots represent increases and the blue lines represent decreases.

8.1.5 Absolute plots for the Do Something (2041) scenario comprising the following:

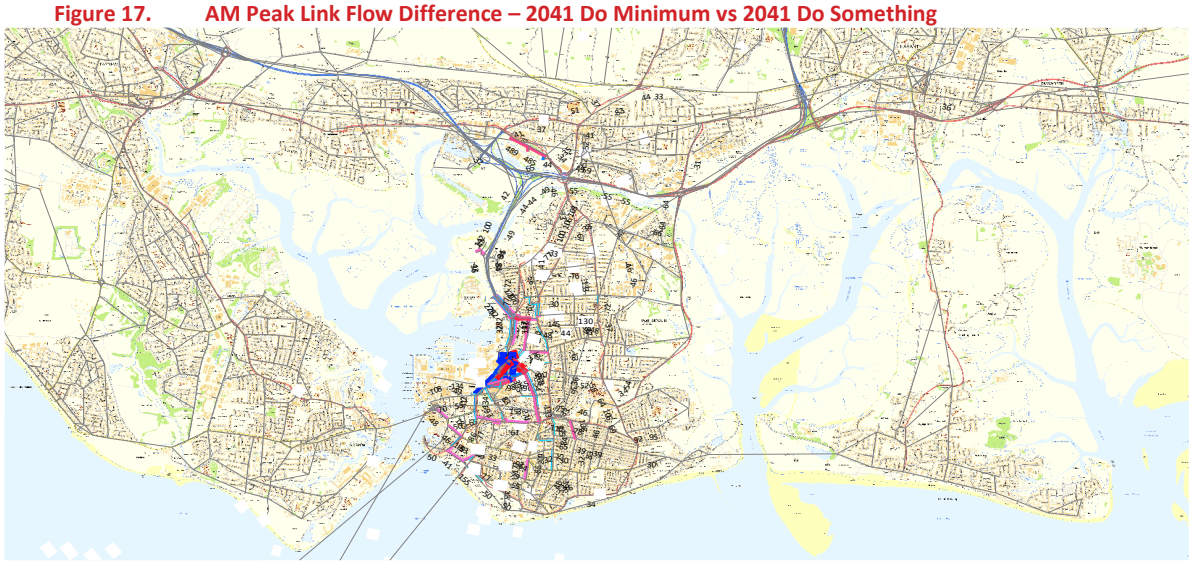
- Volume/Capacity Ratio – shows the absolute V/C ratio for links >50 (capacity on each link).

8.1.6 Additionally, in the City Centre where the road layout has significantly altered between the 2041 Do Minimum and 2041 Do Something layout, flow difference plots are not always representative between the highway links and therefore the absolute plots for flows, delay and V/C have been analysed to consider how the future network is forecast to operate with the City Centre road scheme in place.

8.2 AM Peak Data Plots

Link Flow Difference Plot

Figure 17. AM Peak Link Flow Difference – 2041 Do Minimum vs 2041 Do Something

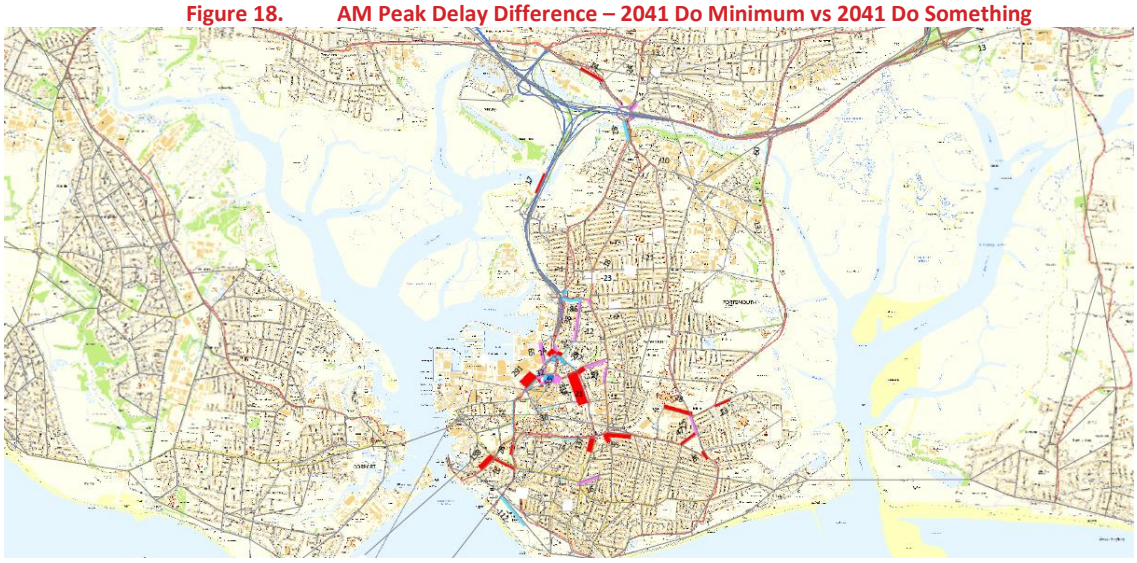


8.2.1 **Figure 17** identifies the following:

- The addition of a secondary access to the Lakeside development is resulting in 479 vehicles shifting from the existing access to the new secondary access, hence resulting in 475 fewer vehicles along the A27 Western Road between the two vehicle access points.
- The level of flow change associated with the partial signalisation of Portsbridge roundabout is relatively modest, however it is noted that 103 additional vehicles exit Portsbridge roundabout via the A3 London Road which leads southbound towards the City Centre. This suggests that the proposed mitigation scheme at Portsbridge Roundabout and the Lakeside secondary access are having the desired effect of avoiding vehicles re-routing away from Portsbridge Roundabout and the Lakeside access roundabout.

Delay Difference Plot

Figure 18. AM Peak Delay Difference – 2041 Do Minimum vs 2041 Do Something

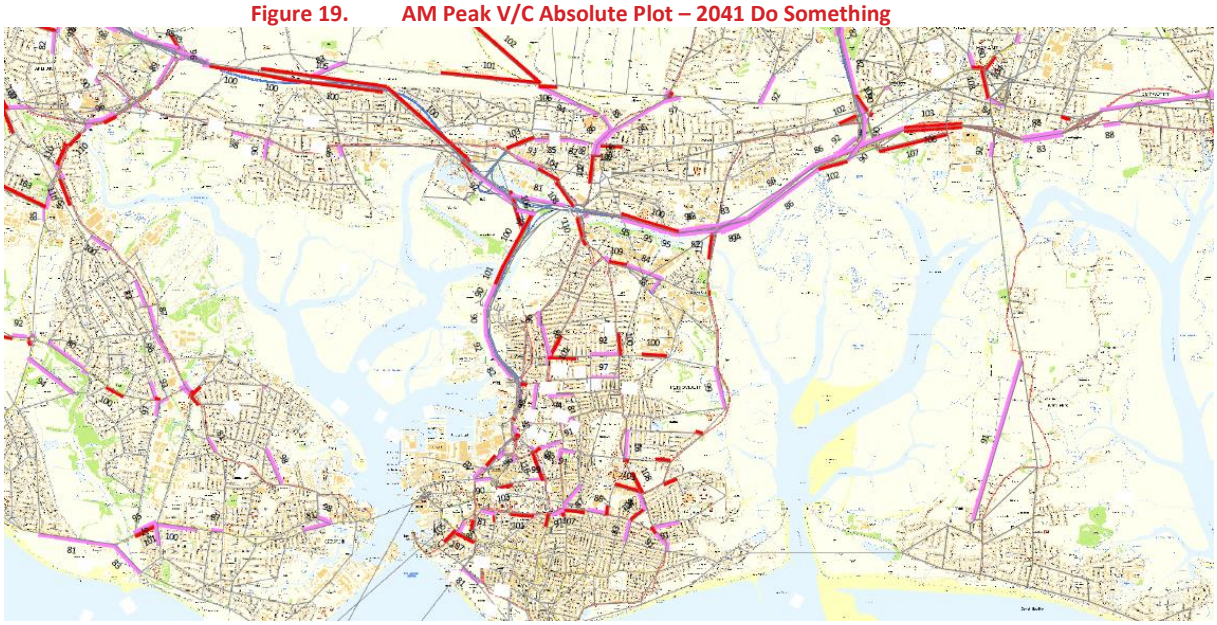


8.2.2 **Figure 18** identifies the following:

- There is a minor increase in delay of 14 seconds for southbound vehicles along the A27 Western Road on approach to the Lakeside roundabout. This minor increase in delay is considered offset with the wider benefits of alleviating pressure from a single point of access particularly in the PM peak.
- There is an increase of delay incurred of between 16 and 21 seconds for the internal circulatory for Portsbridge roundabout. This is to be expected given the introduction of signalisation at the northern section of the roundabout to allow balancing of movements across approach arms.
- There is an increase of delay of 45 seconds on the A397 Northern Road arm. This is expected due to traffic being held back on this approach arm to allow for the signalised bus gate and the internal roundabout circulatory traffic phase.
- There is a decrease in delay of 82 seconds for vehicles on the A3 London Road approach arm (northbound).
- As a result of the Rudmore roundabout scheme there is a decrease in delay of 119 seconds along Kingston Crescent due to signalisation of this arm. Additionally, the A3 Stamshaw Road observes a decrease in delay of 141 seconds. Whilst there is an increase in delay around the circulatory of 42 seconds due to the signalisation, this is offset by improvements on the approach arms.
- A 60 second delay reduction occurs on the A2030 Eastern Road upon approach to the A2030 Eastern Road/Havant Bypass junction. This is likely associated with a slight reduction of vehicles (64) utilising this route in the AM peak.

V/C Absolute Plot

Figure 19. AM Peak V/C Absolute Plot – 2041 Do Something



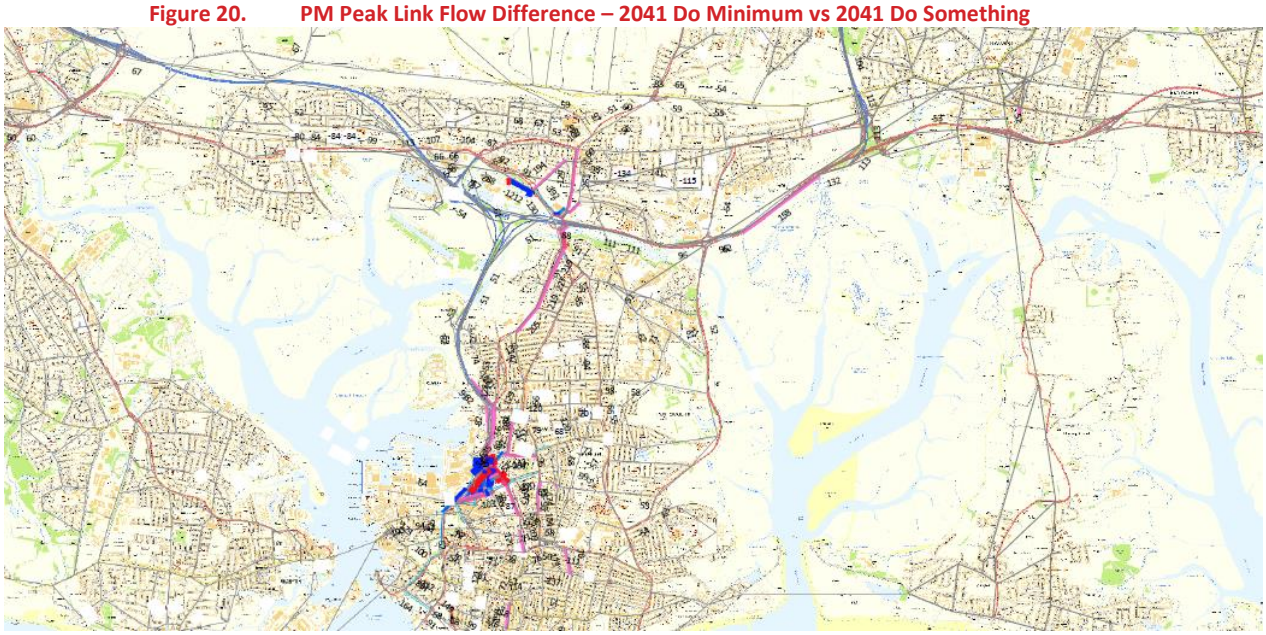
8.2.3 **Figure 19** identifies the following:

- There is no material change in V/C along the SRN mainline between the 2041 Do Minimum and 2041 Do Something scenario.
- A slight reduction in V/C is forecast on the A3 London Road northbound approach to Portsbridge roundabout from 111 to 110. The M27 off-slip, the A397 Northern Road and A27 Western Road are all operating within capacity. A greater volume of vehicles may be attracted to route via Portsbridge roundabout compared to the Do Minimum scenario due to reduced congestion at the Lakeside Access.
- The A27 Western Road northbound approach to the Lakeside access has reduced in V/C from 111 to 108, due to vehicles exiting via the secondary access hence alleviating pressure at the Lakeside access roundabout.

8.3 PM Peak Data Plots

Link Flow Difference Plot

Figure 20. PM Peak Link Flow Difference – 2041 Do Minimum vs 2041 Do Something

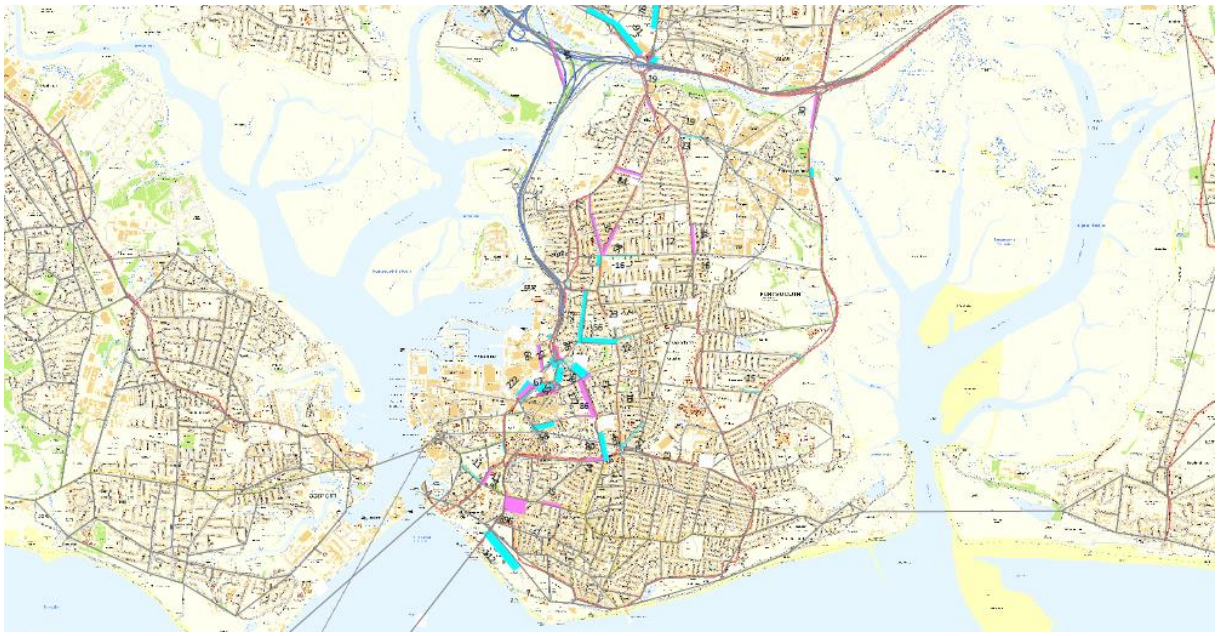


8.3.1 **Figure 20** identifies the following:

- There is a significant decrease in flows (-1212) travelling on the A27 Western Road northbound exit arm from the Lakeside roundabout in the PM peak. This is attributed to the proposed secondary access on the A27 Western Road, with approximately 1300 vehicles using the new proposed Lakeside access which is further west than the current access hence the reduction.
- The secondary access links to there being a decrease in trips travelling to Portsbridge roundabout (-393 southbound on Northern Road), with vehicles more likely to use the M275 J12 to travel to the SRN or the city compared to Portsbridge roundabout, due the location of the proposed new exit.

8.3.2 Delay Difference Plot

Figure 21. PM Peak Delay Difference – 2041 Do Minimum vs 2041 Do Something

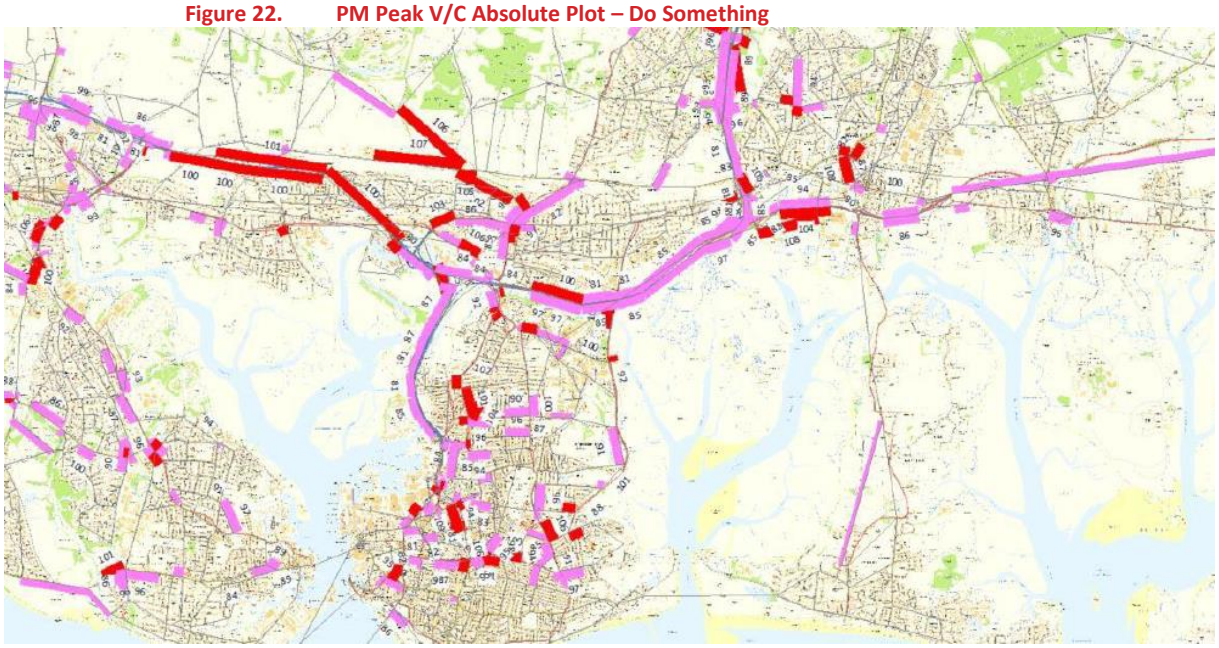


8.3.3 **Figure 21** identifies the following:

- There is a significant decrease in delay (-78 seconds) for the Lakeside Access roundabout, on the southbound A27 Western Road arm. This is due to the proposed secondary access which allows for left turn entry/exit, reducing congestion closer to the roundabout with significantly less vehicles using the existing Lakeside access to exit the development.
- There is a decrease in delay of 91 seconds between the Lakeside access roundabout to Portsbridge roundabout, due to reduced flows along this link. It is noted that the short link after the removed left turn bypass has an increase in delay (192 seconds) associated with signalisation of Portsbridge and the removal of the left turn bypass. Any queues here are not reported to impact the operation of the adjacent Lakeside access roundabout.
- An increase in delay has occurred at the bus lane feeding into Portsbridge roundabout, however upon delivery the signals could operate with bus priority detectors to ensure the green phase for buses is prioritised. There is a decrease in delay of 112 seconds along the A397 Northern Road.
- A decrease in delay is observed on the A2030 Eastern Road southbound movement, associated with the A2030 Eastern Road/Havant Bypass junction. It can be observed that potentially less vehicles are using this route to access the city centre, and are using Portsbridge Roundabout instead, with vehicles choosing to the more direct routes via the M275 and the A3, due to mitigations in place.

V/C Absolute Plot

Figure 22. PM Peak V/C Absolute Plot – Do Something



8.3.4 **Figure 22** identifies the following:

- There is no material change in V/C along the SRN mainline between the 2041 Do Minimum and 2041 Do Something scenario.
- There is an increase in V/C on the A27 Western Road arm southbound into the Lakeside access roundabout from a V/C of 101 to 106. The A27 Western Road northbound approach to the Lakeside roundabout operates within capacity with a V/C of 91.
- Portsbridge roundabout is operating within capacity due to partial signalisation and a level of re-routing of Lakeside flows towards the M27 Junction 12, due to the new secondary left turn exit at the strategic site. At Portsbridge roundabout the highest V/C on the approach arms is 92 on the A3 London Road northbound arm a slight increase from 89 in the Do Minimum Scenario. The M27 off-slip has a V/C below 50, however the link between the left bypass and the roundabout is showing a V/C of 101 over this short link length as per the Do Minimum scenario.
- A high V/C of 101 is forecast between the two proposed signalised junctions on Church Street. Queue build up could lead to significant issues in this location given the very limited stacking space between the junctions.

8.4 Do Something SRTM Results Summary

8.4.1 Overall, it can be seen that the preferred mitigations impact the trip distribution across the Portsmouth network positively, especially in the PM peak due to the addition of a Lakeside left turn exit only onto the A27 Western Road northbound. As Lakeside is assigned as an employment based strategic site for development, higher level of vehicles will be exiting during the PM peak, then travelling to M27 J12.

8.4.2 The Portsbridge roundabout partial signalisation is having the desired effect of balancing any impacts between the local and strategic road network and minimising re-routing of vehicles away from Portsbridge and the Lakeside access roundabout to avoid delay.

9. SUMMARY AND CONCLUSIONS

9.1.1 As part of SYSTRA's ongoing studies surrounding the development of the Portsmouth Local Plan, this Technical Note has presented a summary of the analysis conducted to date of the existing key junctions of Portsbridge Roundabout, Havant Bypass/A2030 Eastern Road Roundabout, and the adjacent Lakeside and Rudmore Roundabouts. The Technical Note has assessed the current performance of the junctions and set out SYSTRA's appraisal of considered mitigation options.

9.1.2 The mitigation options have been assessed through a Do Something model run of the SRTM model. The results indicate that the preferred mitigations impact the trip distribution across the Portsmouth network positively. The Lakeside secondary access and the Portsbridge Roundabout schemes overall have positive impacts on the safe and efficient operation of the SRN.

9.1.3 The outcomes and conclusions of this assessment have informed the development on a Strategic Transport Assessment, which provides additional transport evidence to support the Regulation 19 Consultation of the Portsmouth Local Plan which is targeted for June 2024.

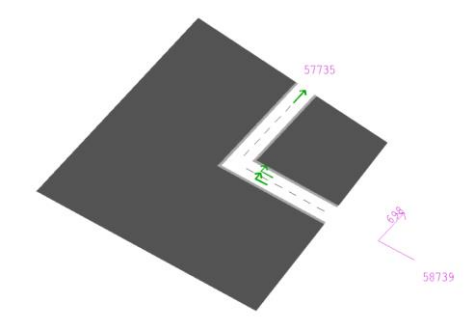
Appendix A – M275 Junction 12 Turning Count Flows

Decathlon
Portsmouth Marriott
Tesco Extra
PlayZone
PETA Training & Consultancy
A27
M27
M275
J2
57743
PORT SOLENT
Marina
IBM UK
57734
Lakeside North Harbour
ODEON Port Solent
58735
58745
Lakeside Fitness Trail
Defence Diving School
Horsea Island
58739
Royal Navy Sea Survival School
58737

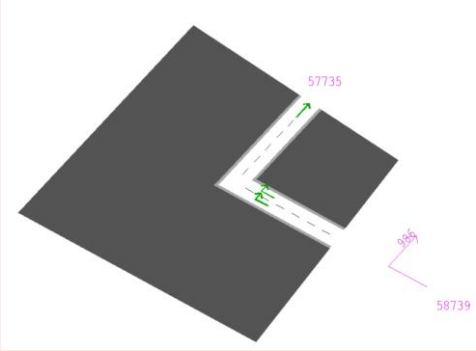
58735

Turning Counts
Demand Flow (PCU/hr)

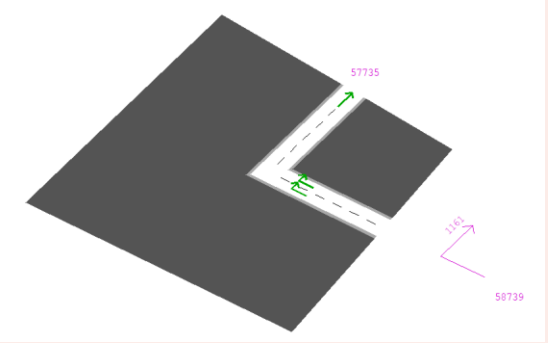
2019 Base AM Peak



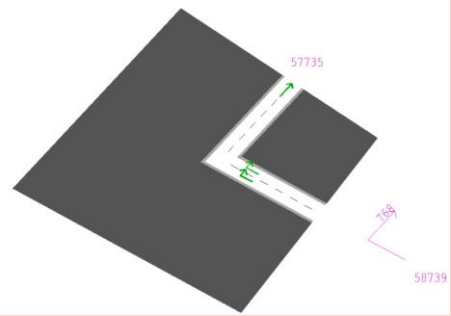
2041 Baseline AM Peak



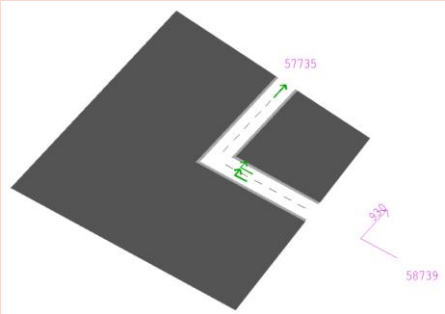
2041 DM AM Peak



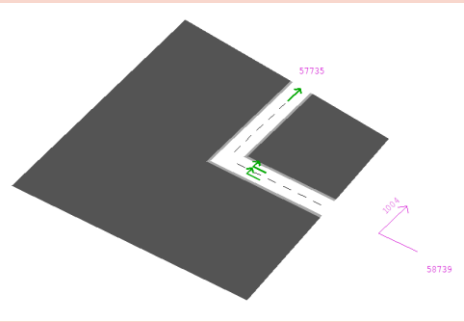
2019 Base PM Peak



2041 Baseline PM Peak



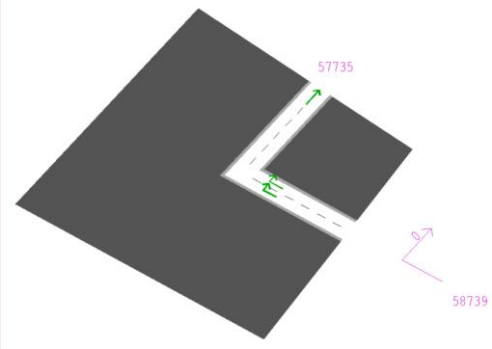
2041 DM PM Peak



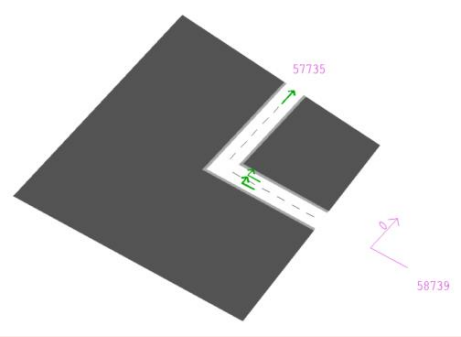
58735

Turning Counts
Queue Length (PCUs)

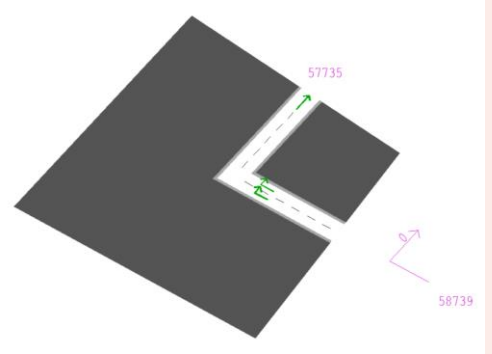
2019 Base AM Peak



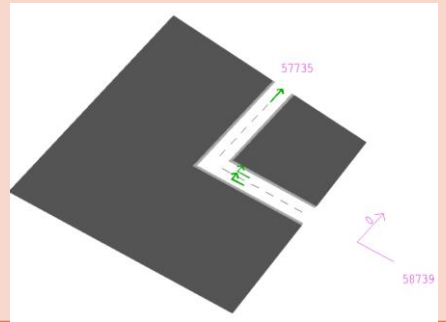
2041 Baseline AM Peak



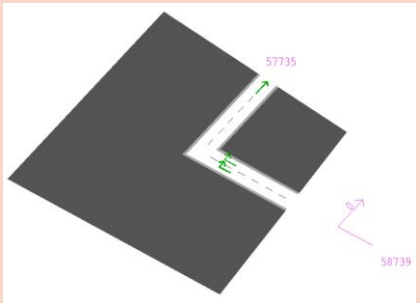
2041 DM AM Peak



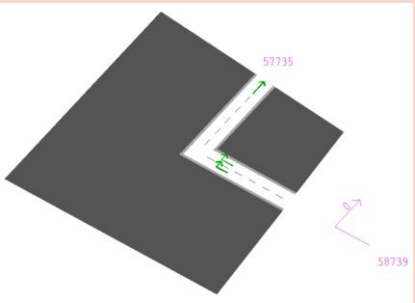
2019 Base PM Peak



2041 Baseline PM Peak



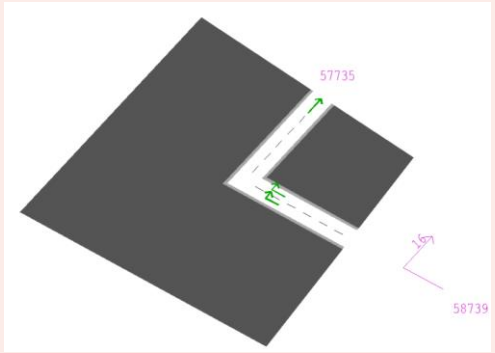
2041 DM PM Peak



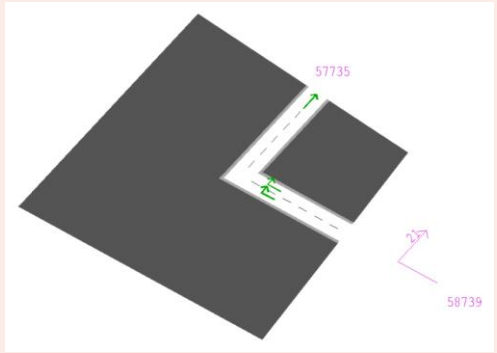
58735

Turning Counts
V/C %

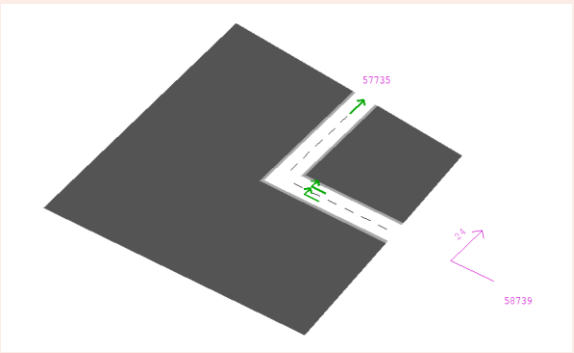
2019 Base AM Peak



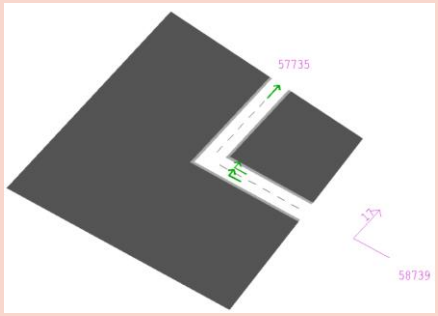
2041 Baseline AM Peak



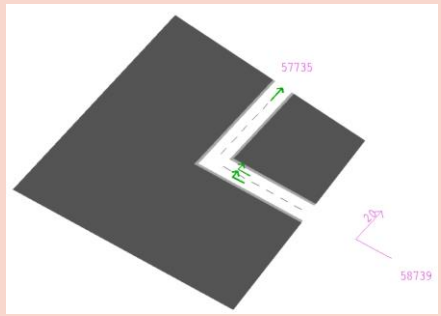
2041 DM AM Peak



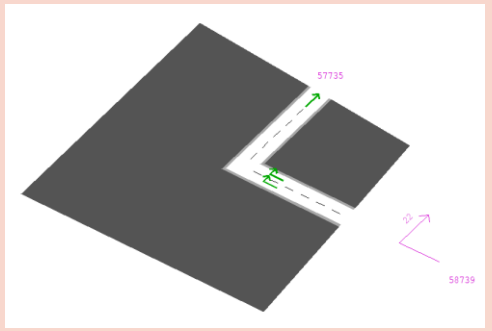
2019 Base PM Peak



2041 Baseline PM Peak



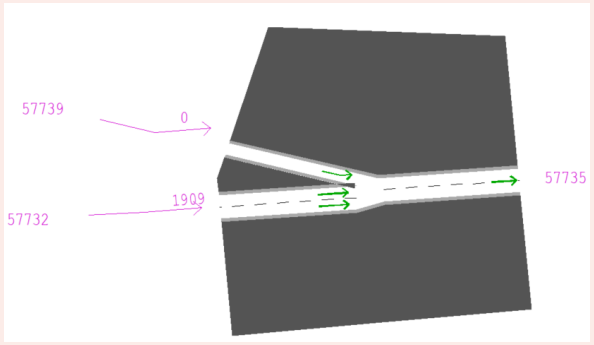
2041 DM PM Peak



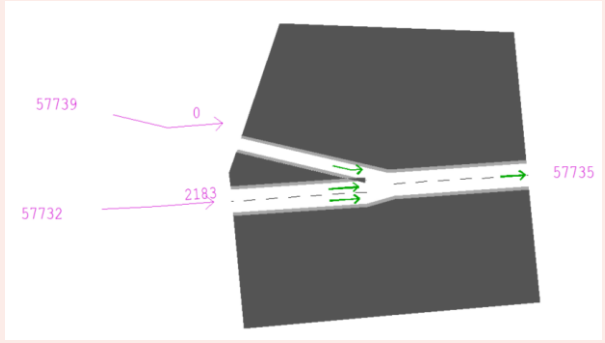
57743

Turning Counts
Demand Flow (PCU/hr)

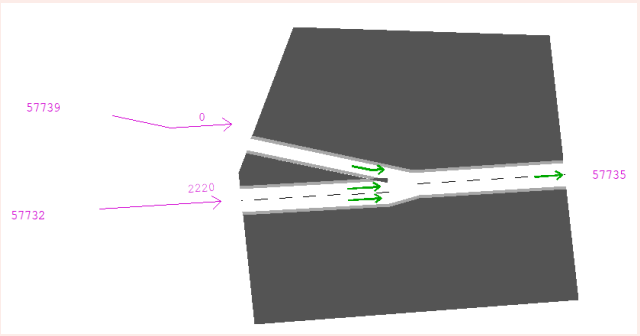
2019 Base AM Peak



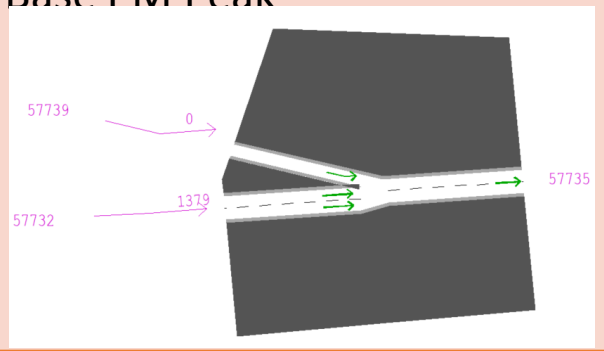
2041 Baseline AM Peak



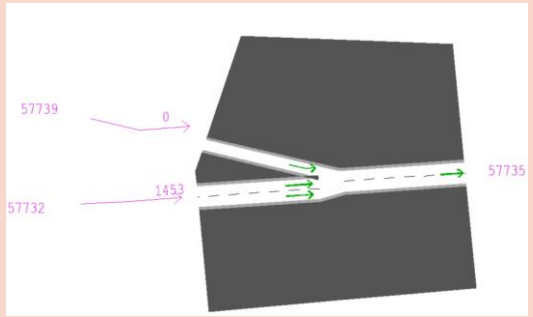
2041 DM AM Peak



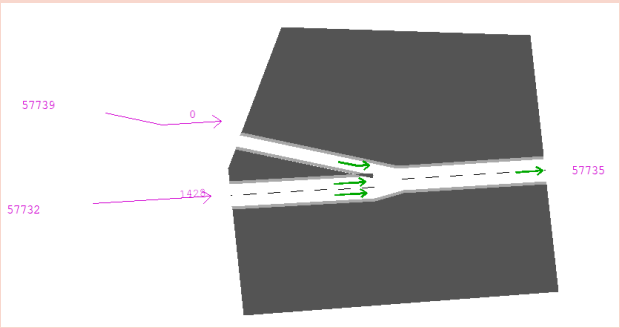
2019 Base PM Peak



2041 Baseline PM Peak



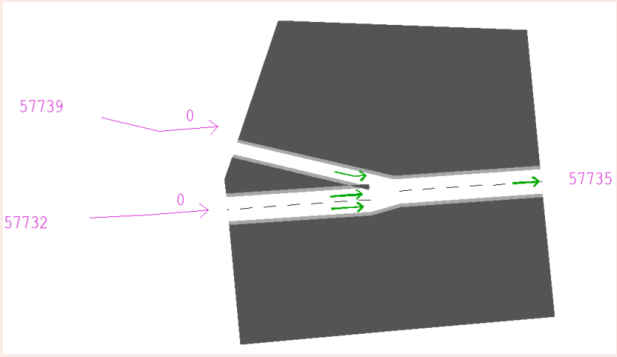
2041 DM PM Peak



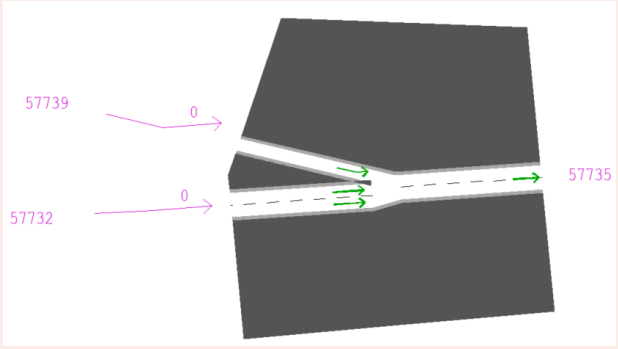
57743

Turning Counts
Queue Length (PCUs)

2019 Base AM Peak



2041 Baseline AM Peak



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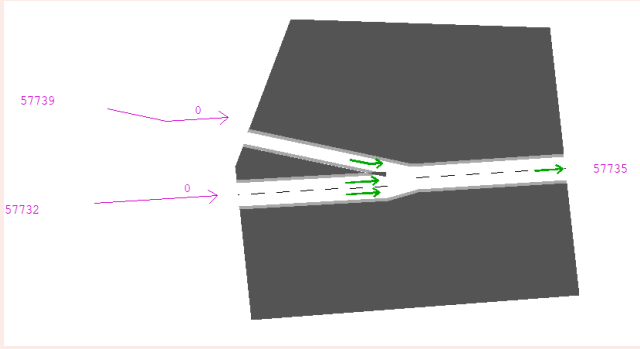
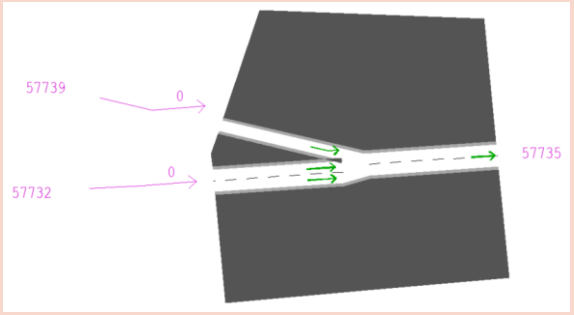


2019 Base PM Peak



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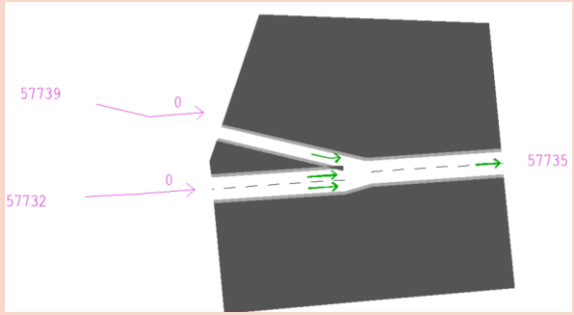

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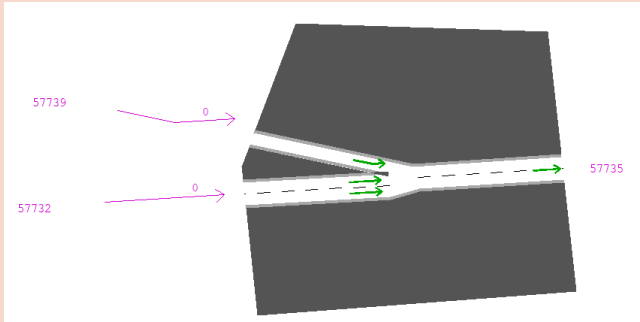
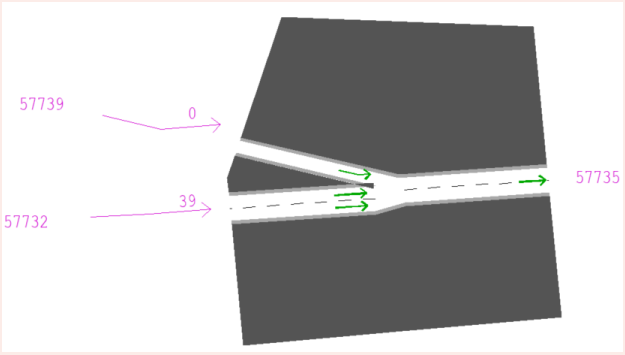


57743

Turning Counts
V/C %

2019 Base AM Peak



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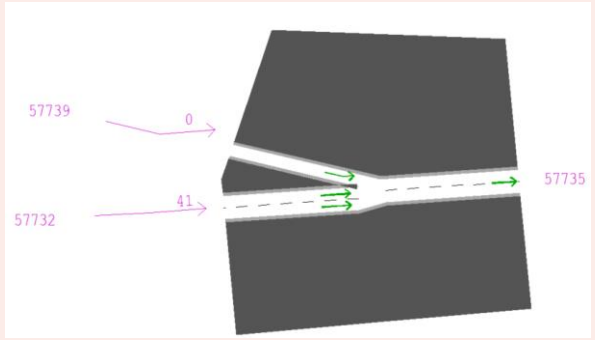

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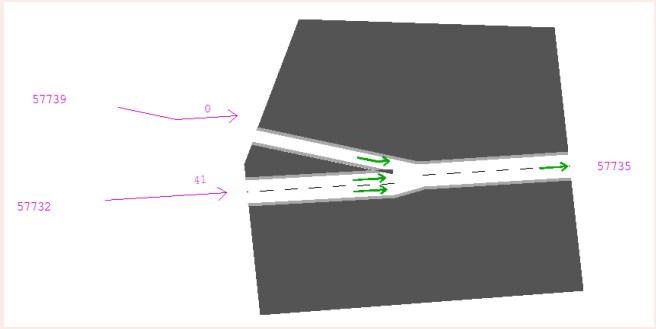
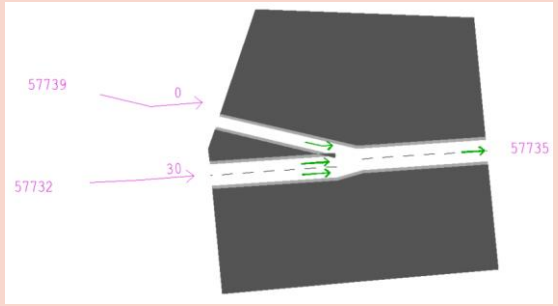


2019 Base PM Peak



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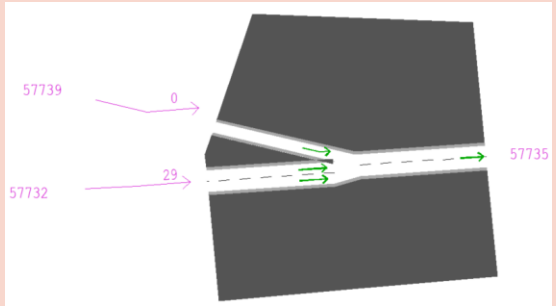

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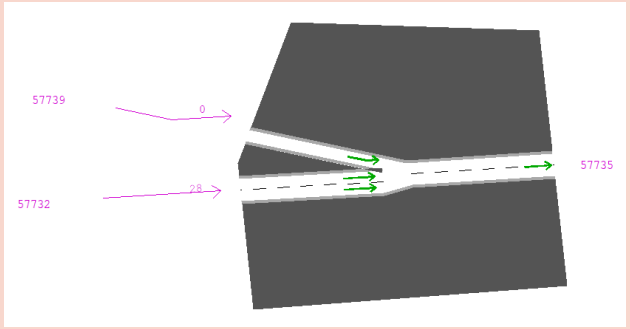
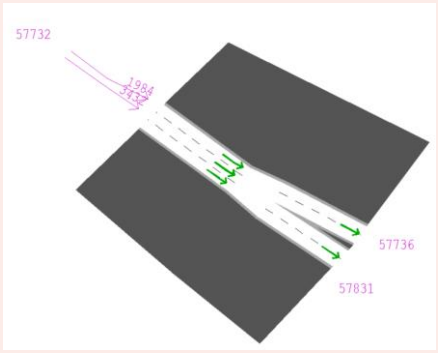


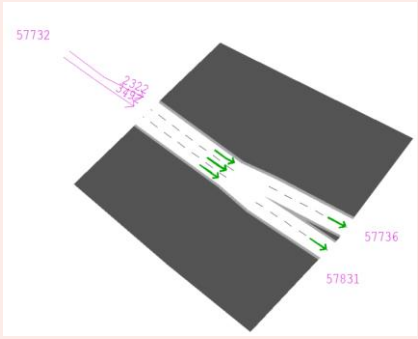
57734

Turning Counts
Demand Flow (PCU/hr)

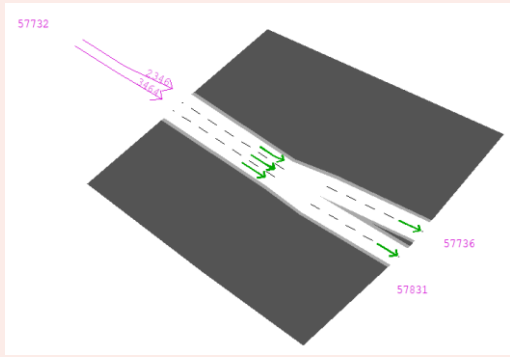
2019 Base AM Peak



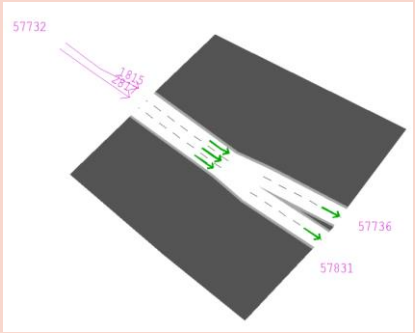
2041 Baseline AM Peak



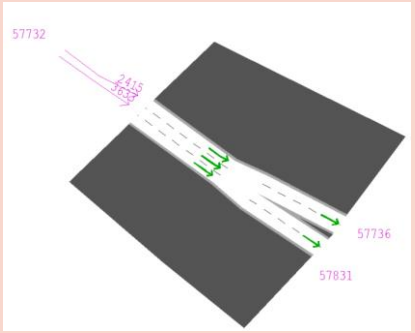
2041 DM AM Peak



2019 Base PM Peak



2041 Baseline PM Peak



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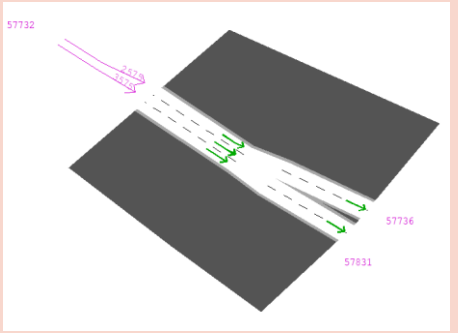
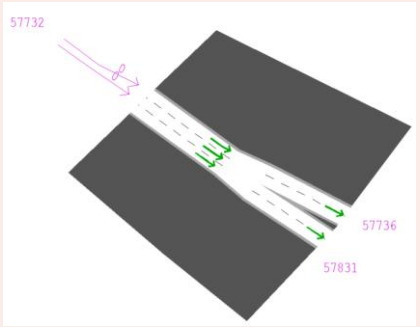


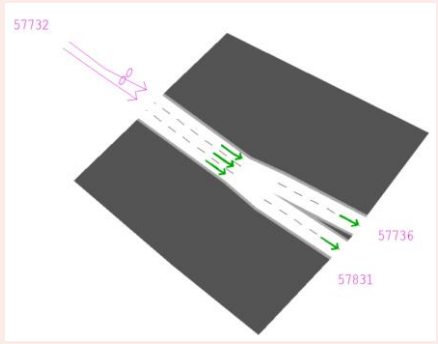
57734

Turning Counts
Queue Length (PCUs)

2019 Base AM Peak



2041 Baseline AM Peak



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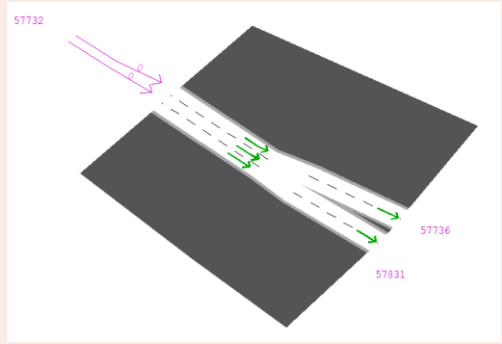
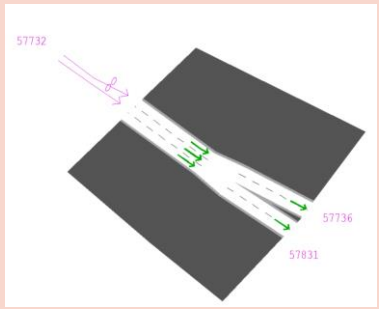


2019 Base PM Peak



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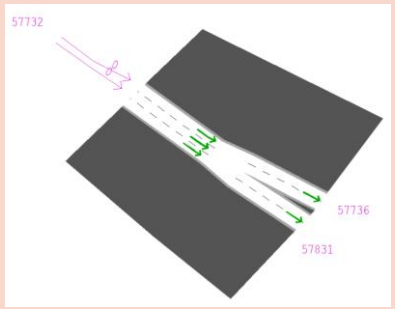

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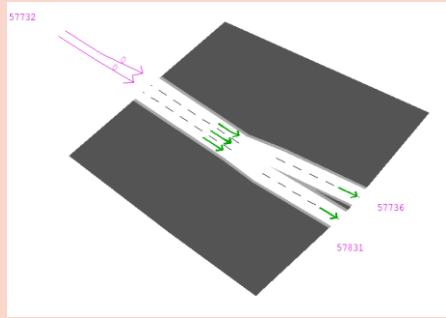
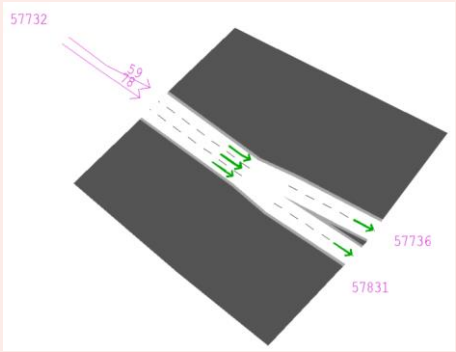


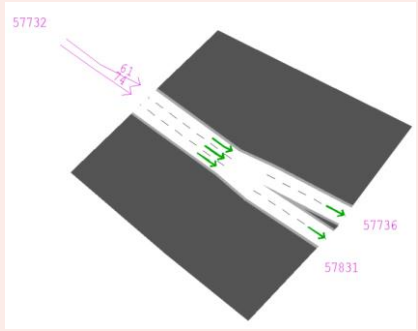
57734

Turning Counts
V/C %

2019 Base AM Peak



2041 Baseline AM Peak



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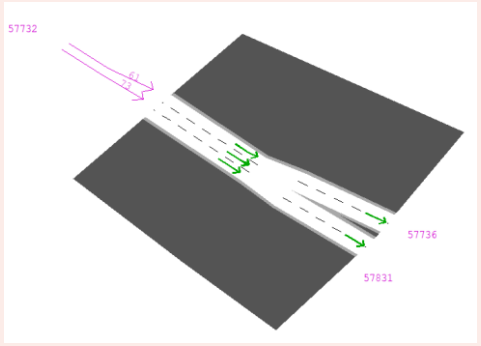
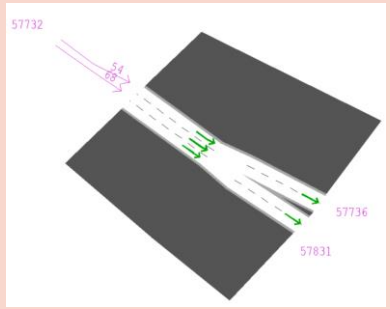


2019 Base PM Peak



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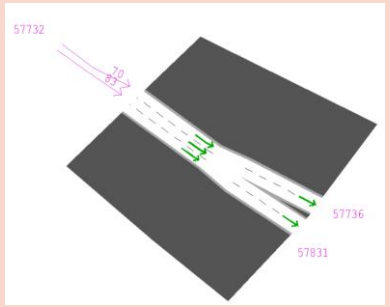
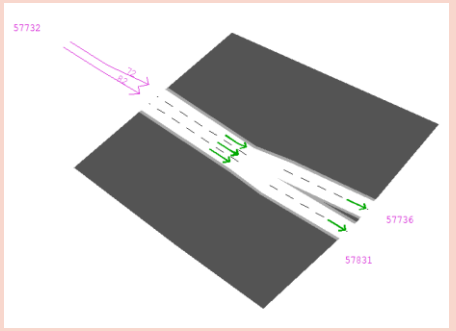


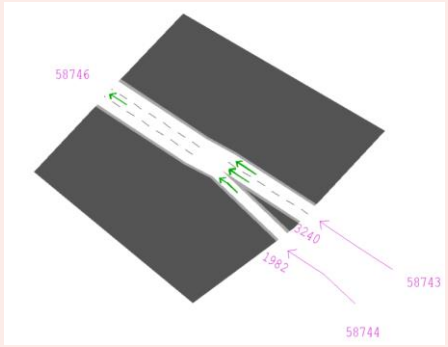
2041 DM PM Peak



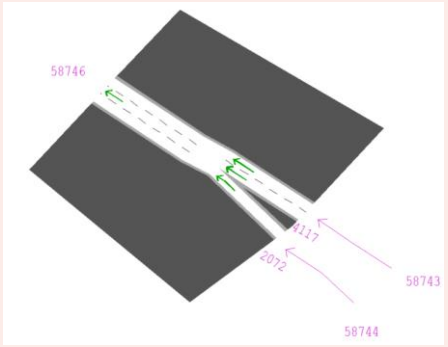
58745

Turning Counts
Demand Flow (PCU/hr)

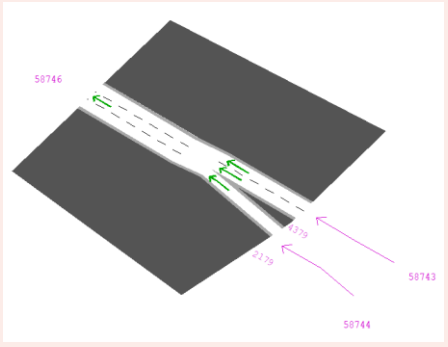
2019 Base AM Peak



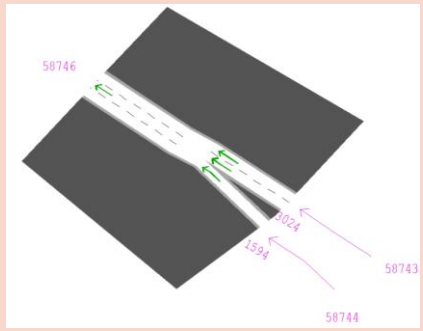
2041 Baseline AM Peak



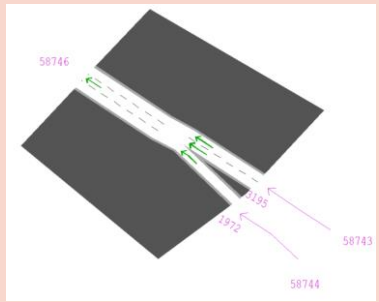
2041 DM AM Peak



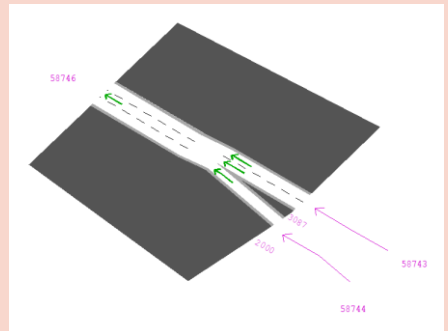
2019 Base PM Peak



2041 Baseline PM Peak



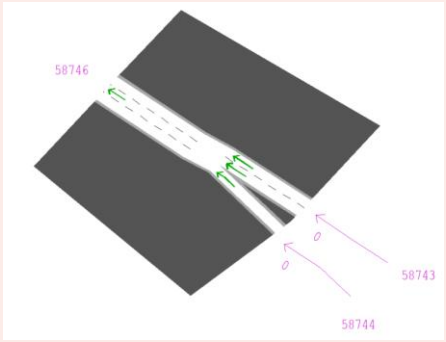
2041 DM PM Peak



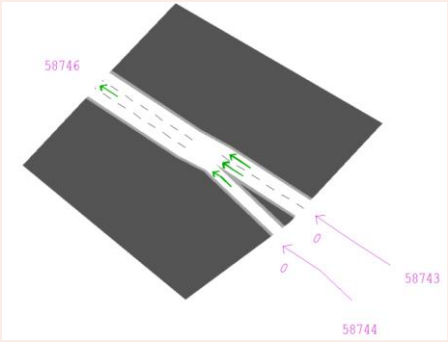
58745

Turning Counts
Queue Length (PCUs)

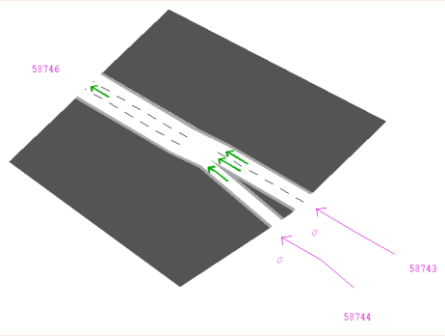
2019 Base AM Peak



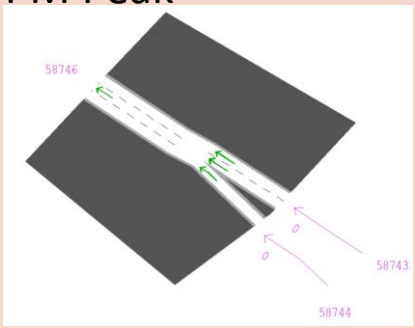
2041 Baseline AM Peak



2041 DM AM Peak



2019 Base PM Peak



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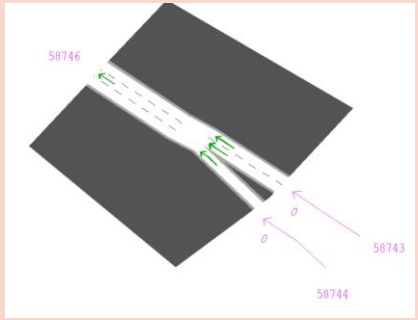
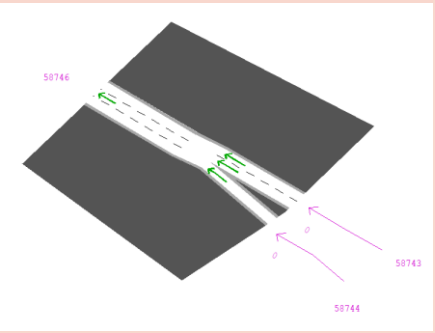


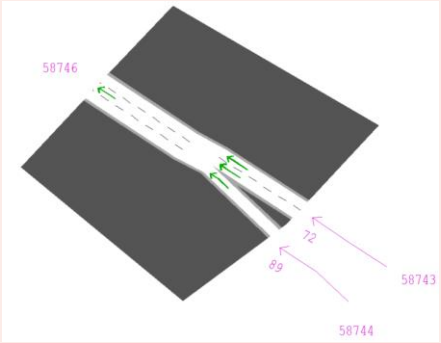
2041 DM PM Peak



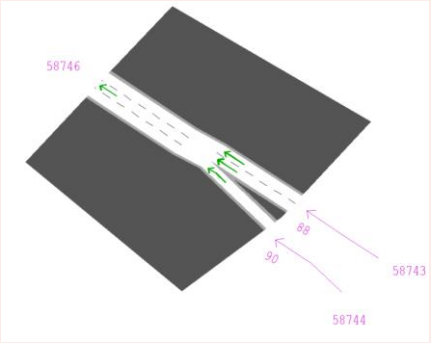
58745

Turning Counts
V/C %

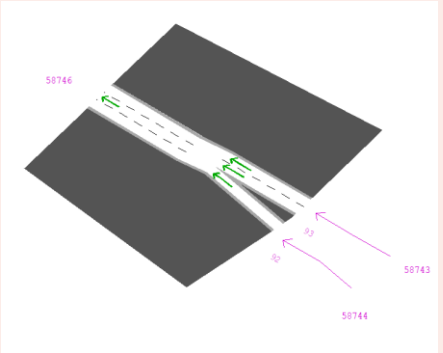
2019 Base AM Peak



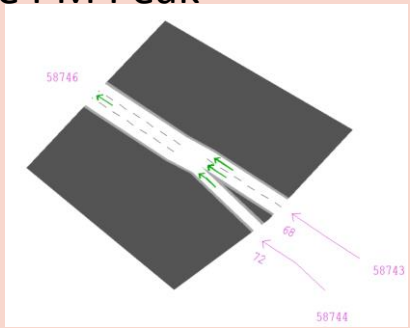
2041 Baseline AM Peak



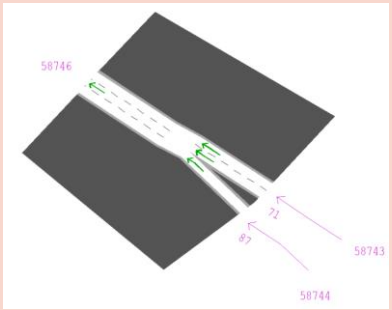
2041 DM AM Peak



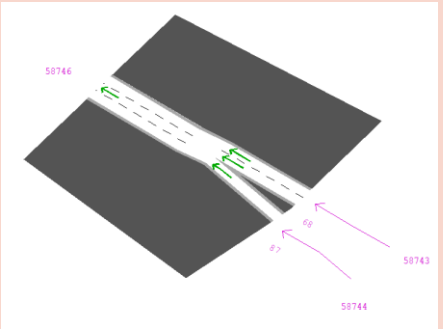
2019 Base PM Peak



2041 Baseline PM Peak



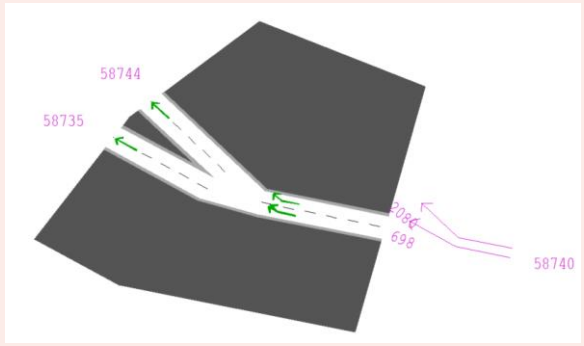
2041 DM PM Peak



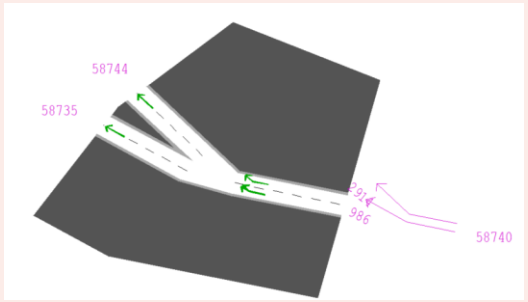
58739

Turning Counts
Demand Flow (PCU/hr)

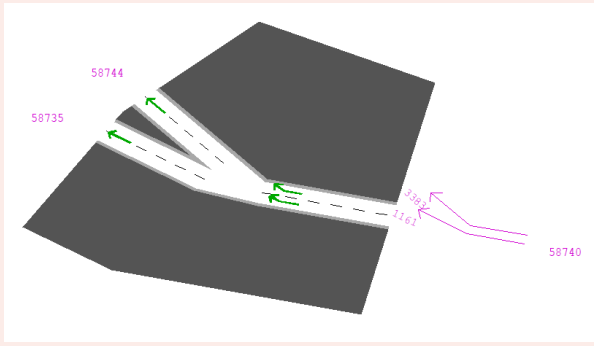
2019 Base AM Peak



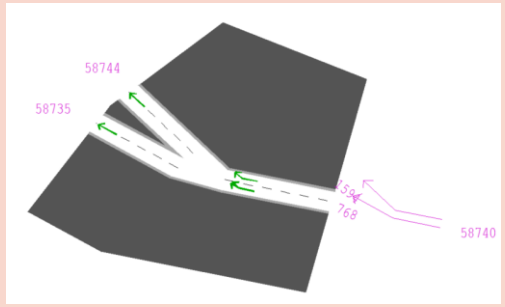
2041 Baseline AM Peak



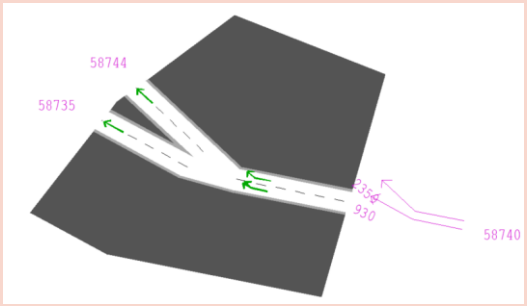
2041 DM AM Peak



2019 Base PM Peak



2041 Baseline PM Peak



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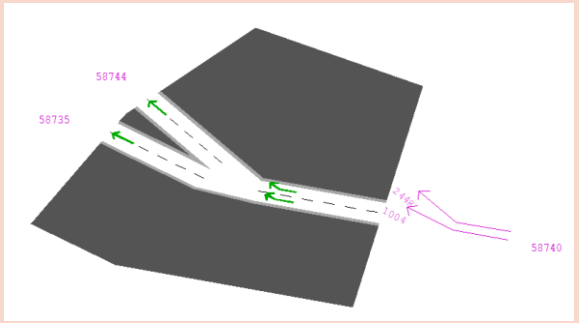
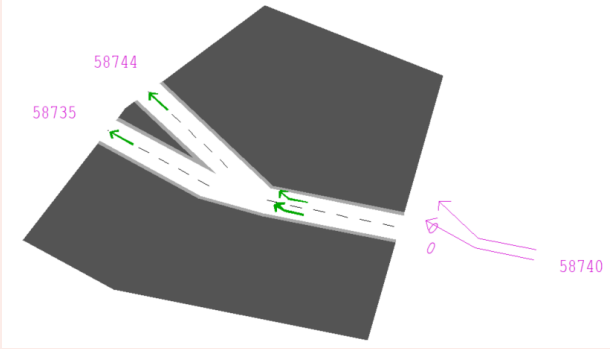


58739

Turning Counts
Queue Length (PCUs)

2019 Base AM Peak



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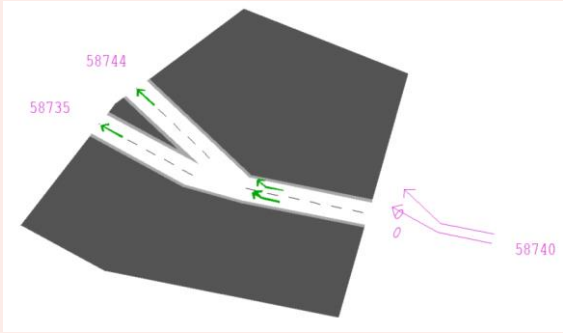

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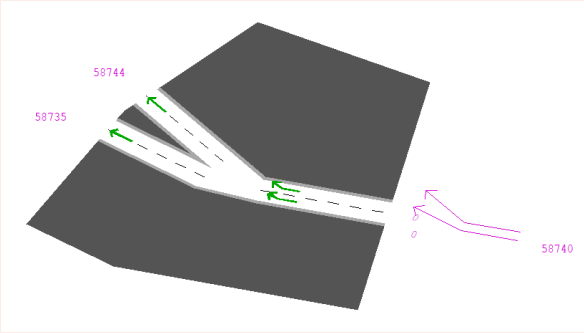

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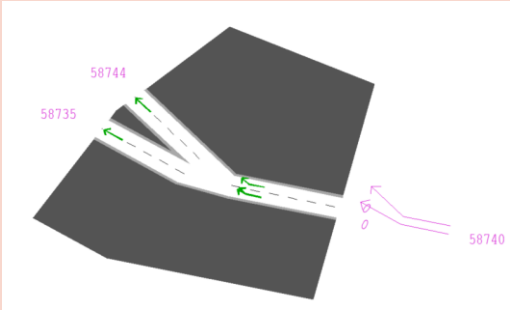

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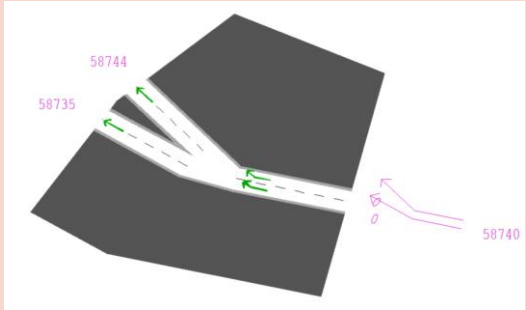

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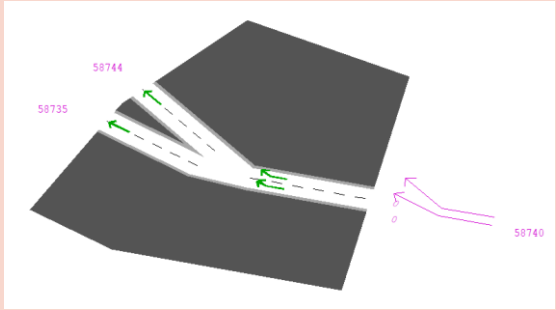
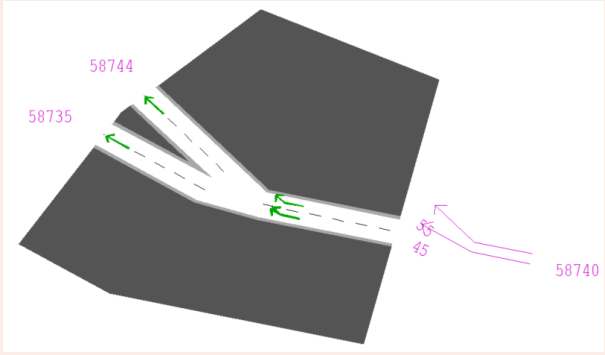


58739

Turning Counts
V/C %

2019 Base AM Peak



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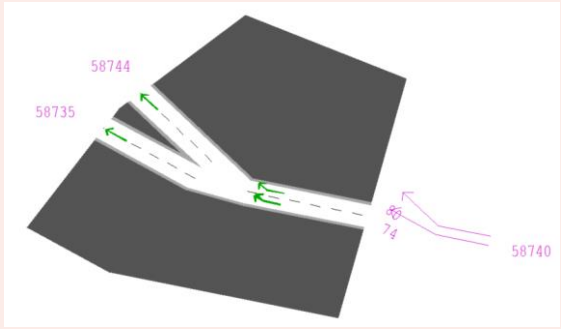

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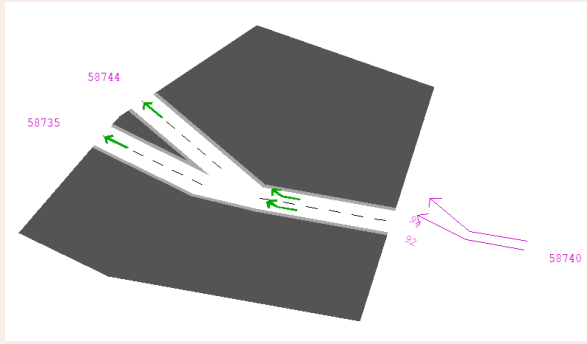

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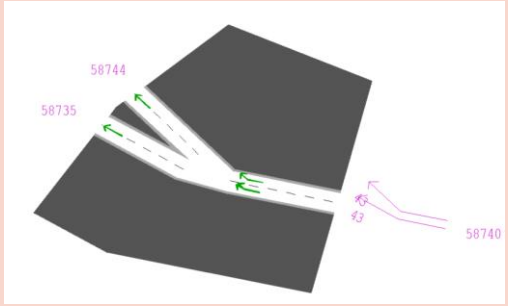

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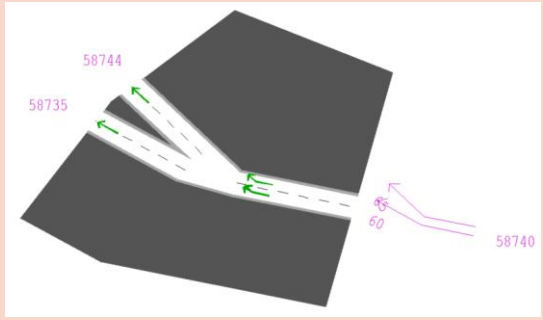

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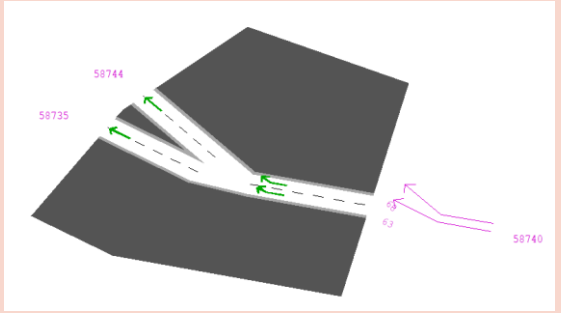
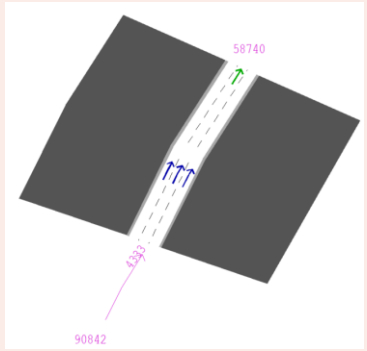


58737

Turning Counts
Demand Flow (PCU/hr)

2019 Base AM Peak



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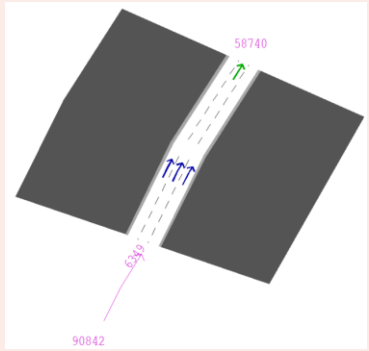

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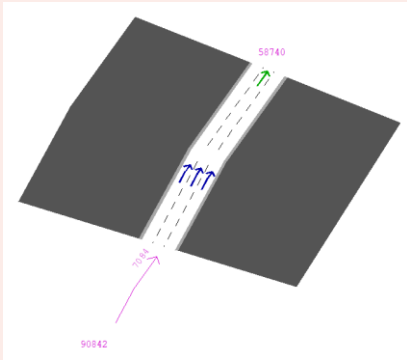
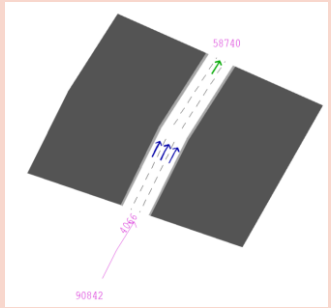


2019 Base PM Peak



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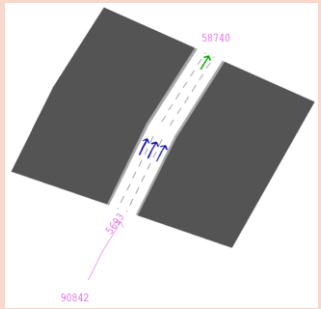

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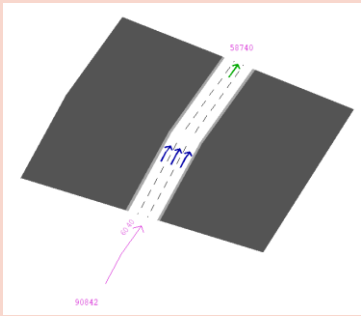
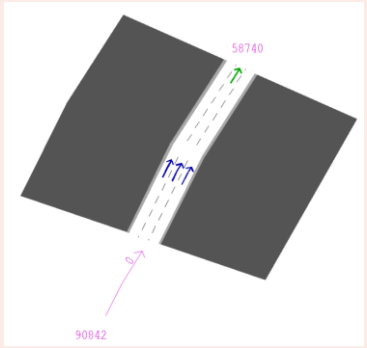


58737

Turning Counts
Queue Length (PCUs)

2019 Base AM Peak



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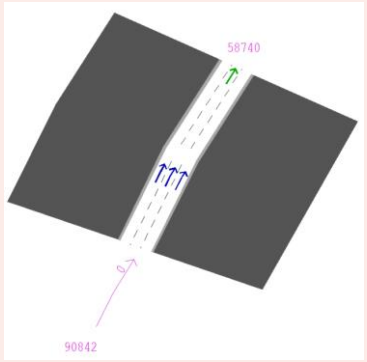

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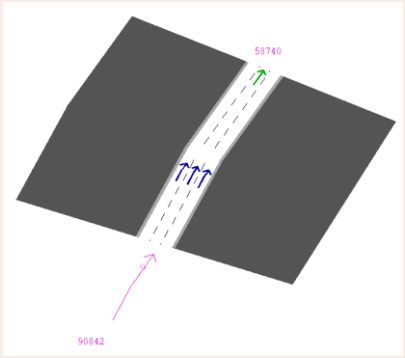

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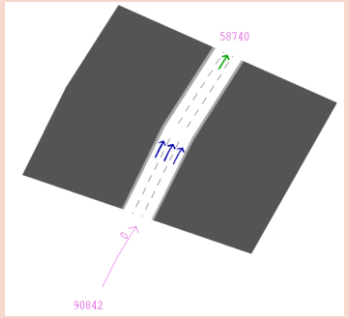

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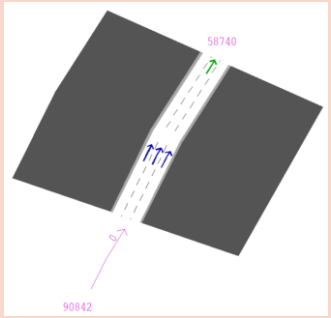

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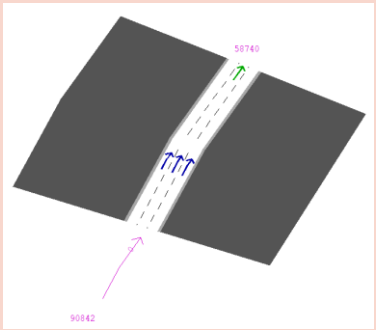
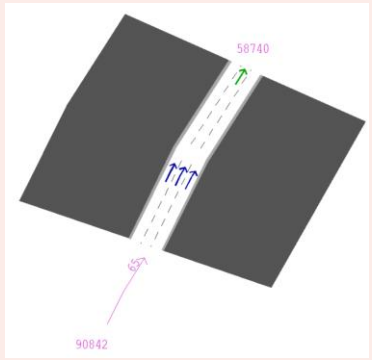


58737

Turning Counts
V/C %

2019 Base AM Peak



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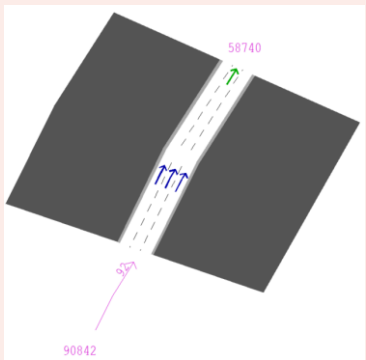

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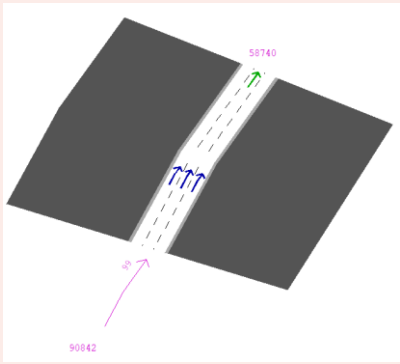

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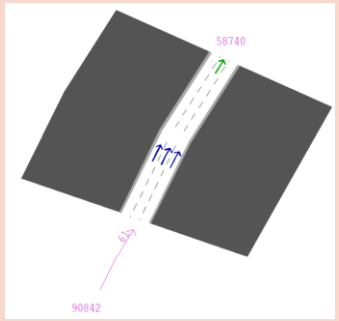

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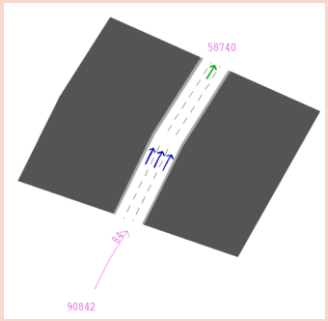

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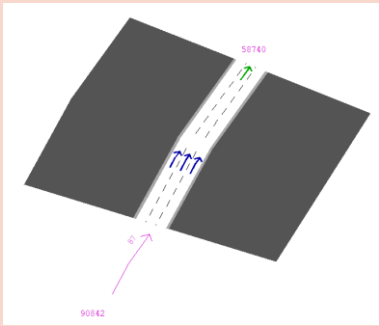
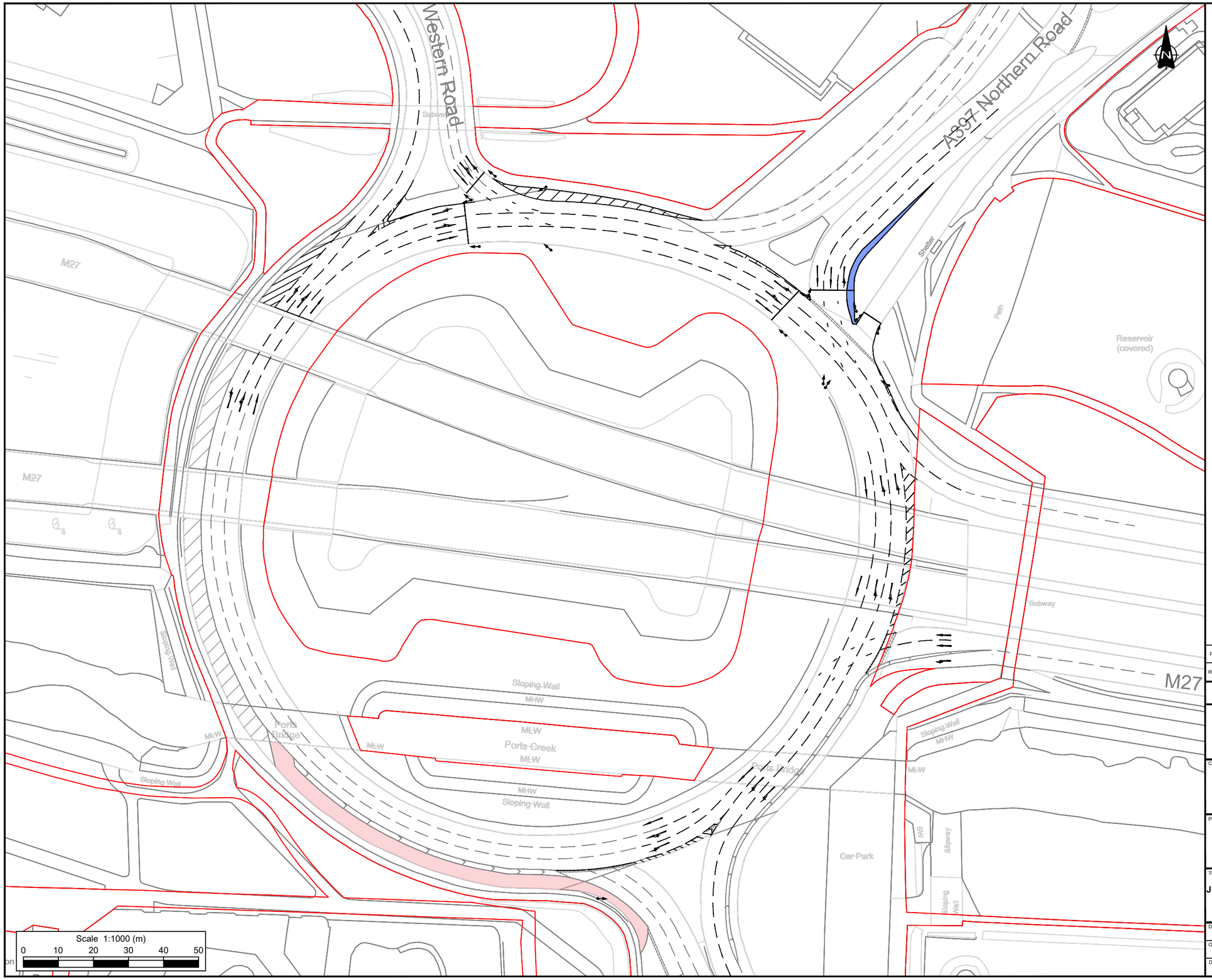


Appendix B – Proposed Mitigation Options for SRN Junctions



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Key:

- Existing Layout
- Highway Boundary
- Proposed Layout
- Proposed Signals
- Bus Lane / Bus Stop
- Proposed Carriageway

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P0	11/12/23	Initial Issue	MIE	ARM	-	-

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Project

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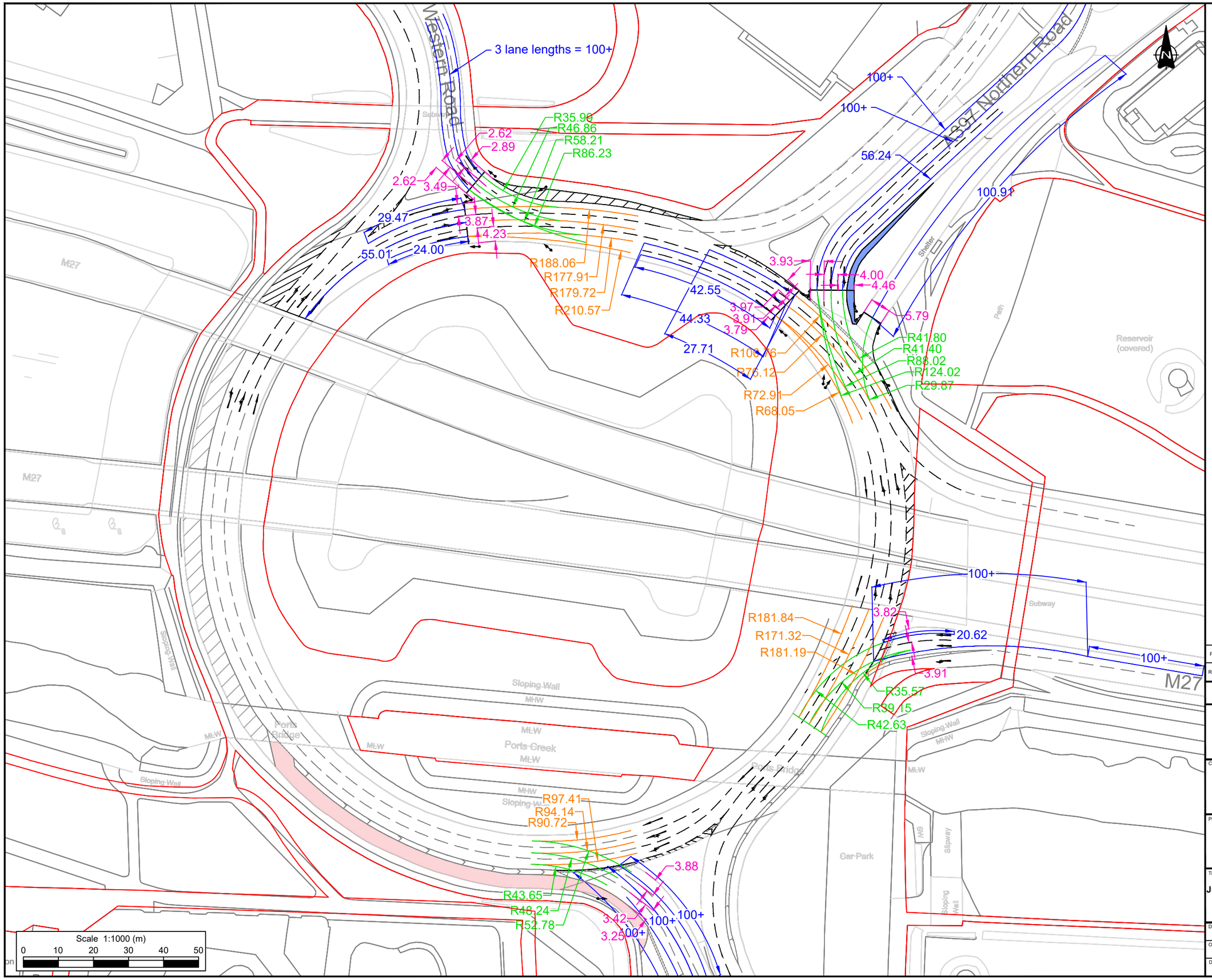
Title

Junction 2 - Portsbridge Roundabout Proposal - Option 3

Drawn	Checked	Reviewed	Approved
MIE	ARM	-	-
Original drg. size	**Date**	**Scale**	**Drawing Status**
A3	11/12/23	1:1000	Preliminary
Drawing Number			**Rev.**
GB01T23C11-DWG-101-2.5			P0



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Key:

- Existing Layout
- Highway Boundary
- Proposed Layout
- Proposed Signals
- Bus Lane / Bus Stop
- Proposed Carriageway
- Internal Turning Radius
- External Turning Radius
- Lane Width
- Lane / Flare Length

Rev	Date	Revision details	Drawn	Check.	Review	Approv
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Title

Junction 2 - Portsbridge Roundabout Proposal - Option 3 - Geometries

Drawn	Checked	Reviewed	Approved
MIE	ARM	-	-

Original drg. size	Date	Scale	Drawing Status
A3	11/12/23	1:1000	Preliminary

Drawing Number	Rev.
GB01T23C11-DWG-101-2.6	P0

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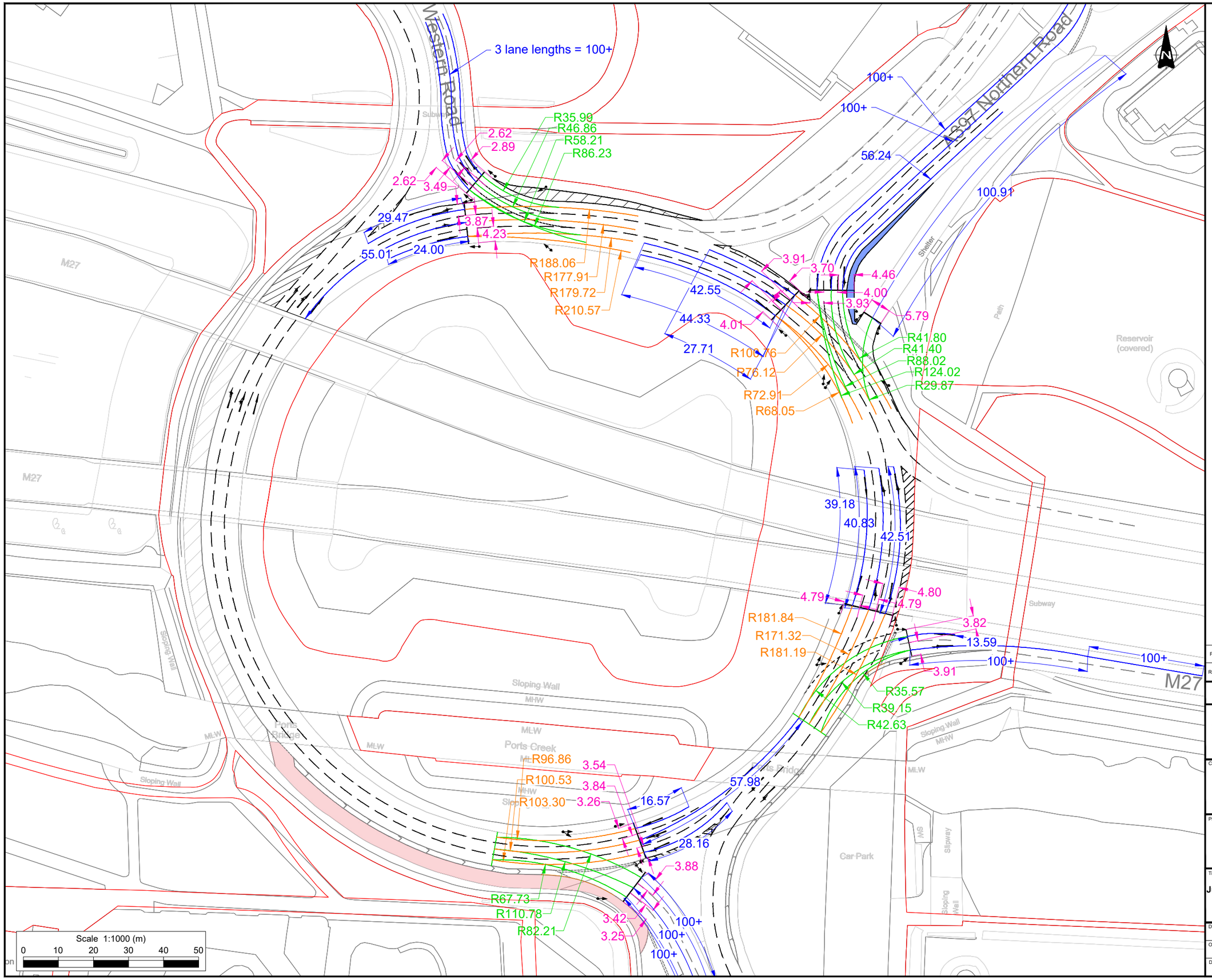
Appendix H - Mitigation Drawings



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Key:

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- Highway Boundary
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- Proposed Signals
- Bus Lane / Bus Stop
- Proposed Carriageway
- Internal Turning Radius
- External Turning Radius
- Lane Width
- Lane / Flare Length

Rev	Date	Revision details	Drawn	Check.	Review	Approv
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Title

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Drawn	Checked	Reviewed	Approved
BG	ARM	NL	NL
Original drg. size	**Date**	**Scale**	**Drawing Status**
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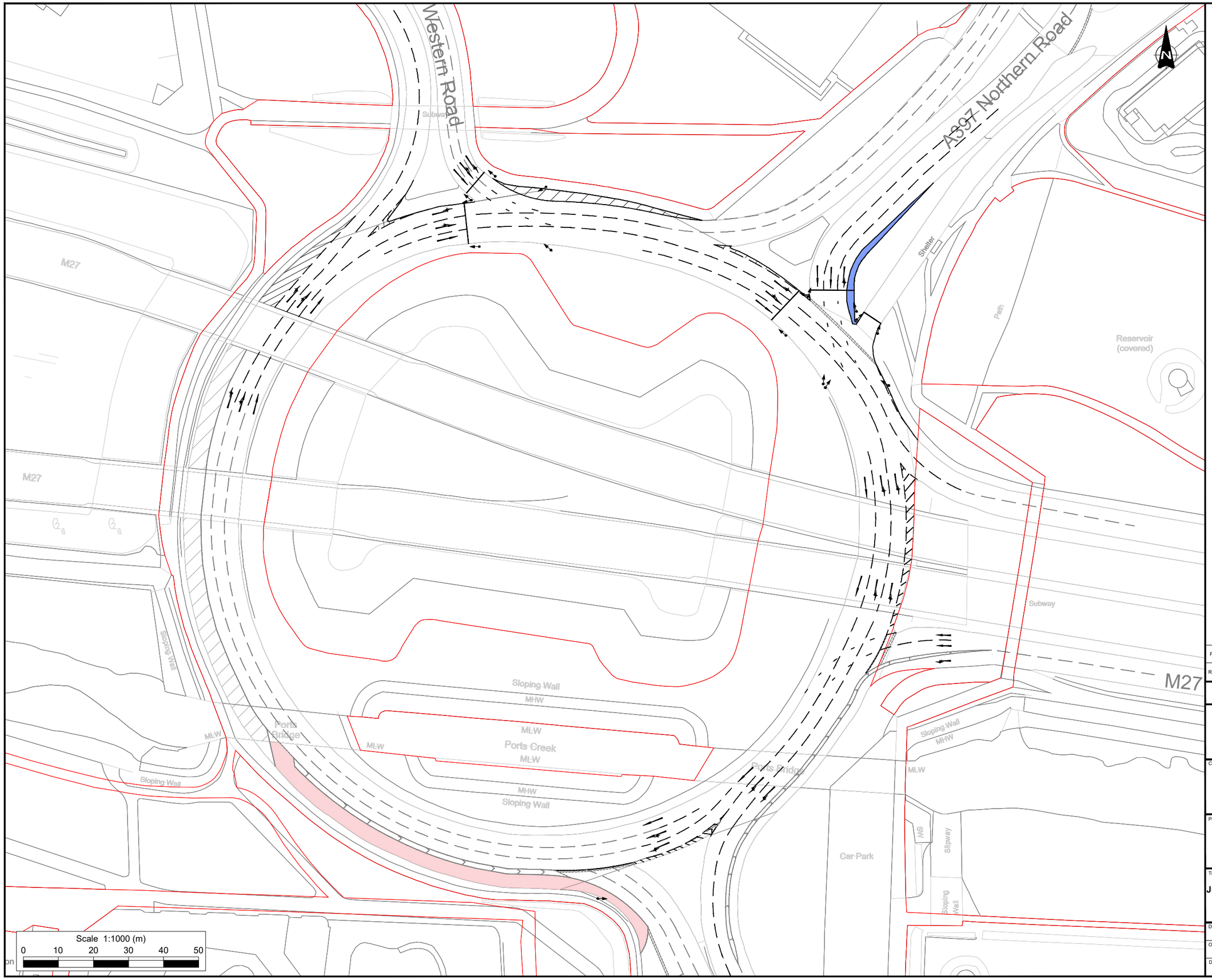
Drawing Number			**Rev.**
GB01T23C11-DWG-101-2.4			P0



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Rev	Date	Revision details	Drawn	Check.	Review	Approv
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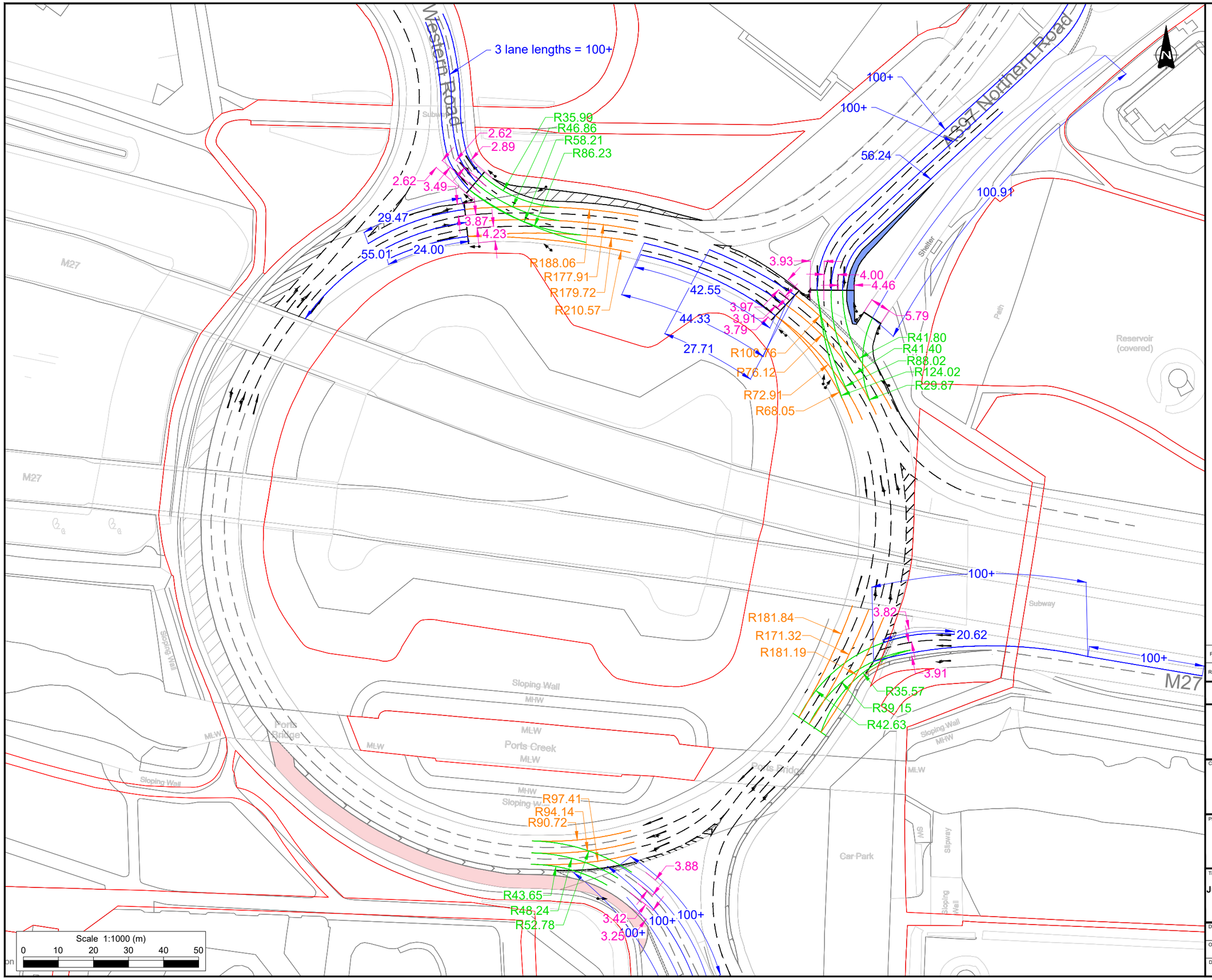
Title

Junction 2 - Portsbridge Roundabout Proposal - Option 3

Drawn	Checked	Reviewed	Approved
MIE	ARM	NL	NL
Original drg. size	**Date**	**Scale**	**Drawing Status**
A3	11/12/23	1:1000	Preliminary
Drawing Number			**Rev.**
GB01T23C11-DWG-101-2.5			P0



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Rev	Date	Revision details	Drawn	Check.	Review	Approv
P0	11/12/23	Initial Issue	MIE	ARM	NL	NL

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Client

Portsmouth City Council

Project

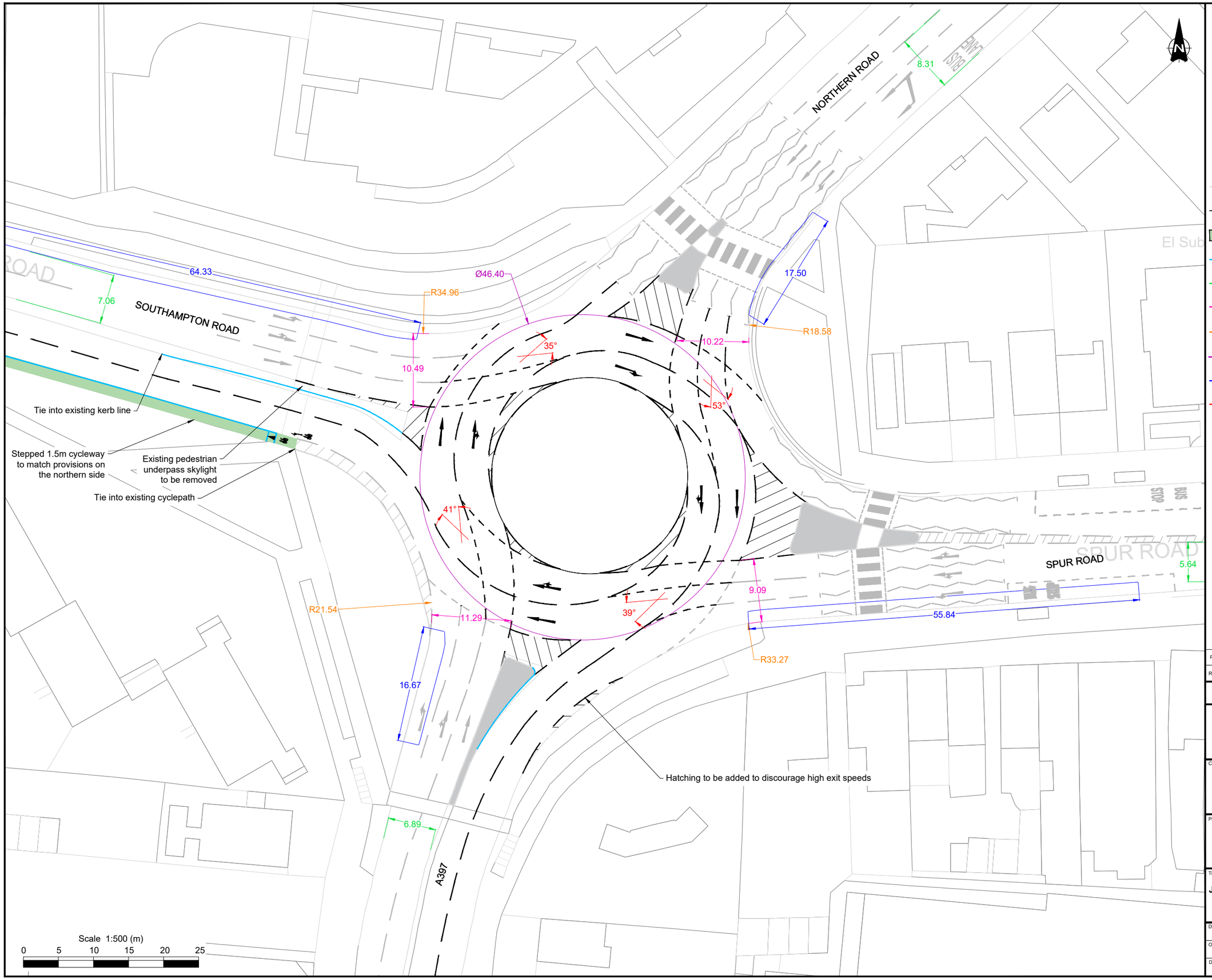
Portsmouth Local Plan Strategic Transport Assessment

Title

Junction 2 - Portsbridge Roundabout Proposal - Option 3 - Geometries

Drawn	Checked	Reviewed	Approved
MIE	ARM	NL	NL
Original drg. size	**Date**	**Scale**	**Drawing Status**
A3	11/12/23	1:1000	Preliminary

Drawing Number: GB01T23C11-DWG-101-2.6 Rev: P0



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Key:

- OS survey
- Proposed Road Markings
- Proposed Cycleway
- Proposed Kerb Line
- Approach Road Half Width
- Entry Width
- Entry Radius
- Inscribed Circular Diameter
- Effective Flare Length
- Conflict Entry Angle

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P0	10/11/23	Initial issue	BG	ARM	NL	NL

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Client: **Portsmouth City Council**

Project: **Portsmouth Local Plan Strategic Transport Assessment**

Title: **Junction 3 - Spur Road Roundabout Proposal - Option 1 - Geometries**

Drawn	Checked	Reviewed	Approved
BG	ARM	NL	NL

Original drg. size	Date	Scale	Drawing Status
A3	10/11/2023	1:500	Preliminary

Drawing Number: GB01T23C11-dwg-101-3.1 Rev. P0

NORTHERN ROAD

SOUTHAMPTON ROAD

SPUR ROAD

A397

64.33

7.06

Ø46.40

R34.96

10.49

35°

10.22

R18.58

17.50

8.31

53°

41°

39°

R21.54

11.29

16.67

10.56

12.80

18.95

7.13

7.52

8.73

6.89

9.09

55.84

5.64

R33.27

Tie into existing kerb line

Stepped 1.5m cycleway to match provisions on the northern side

Existing pedestrian underpass skylight to be removed

Tie into existing cyclepath

1.5m segregated cycleway

Hatching to be added to discourage high exit speeds

Cycle crossing to be on-demand

Scale 1:500 (m)

0 5 10 15 20 25

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Key:

- OS survey
- Proposed Road Markings
- Proposed Cycleway
- Proposed 0.5m Cycleway Segregation
- Proposed Signal
- Proposed Kerb Line
- Approach Road Half Width
- Entry Width
- Entry Radius
- Inscribed Circular Diameter
- Effective Flare Length
- Conflict Entry Angle
- Stop Line Width
- Lane Length
- Crossing Length

Rev	Date	Revision details	Drawn	Check	Review	Approv
P0	10/11/23	Initial issue	BG	ARM	NL	NL

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Client: **Portsmouth City Council**

Project: **Portsmouth Local Plan Strategic Transport Assessment**

Title: **Junction 3 - Spur Road Roundabout Proposal - Option 2 - Geometries**

Drawn	Checked	Reviewed	Approved
BG	ARM	NL	NL

Original drg. size	Date	Scale	Drawing Status
A3	10/11/2023	1:500	Preliminary

Drawing Number: GB01T23C11-dwg-101-3.2 Rev. P0

NORTHARBOUR ROAD

WESTERN ROAD

WESTERN ROAD

7.80

R30.00

5.00

50

7.20

R40.00

4.70

20

3.00

R10.00

R6.00

R10.00

R6.00

Forward visibility: 90m SSD to DMRB, assumed 30mph, as per Vectos Drawing No. VD15341-004-1 Rev. A

Scale 1:1000 (m)

0 10 20 30 40 50

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Key:

- OS mapping
- Proposed kerbs
- Proposed road markings
- Tactile paving for crossing
- R40.00 Dimensions
- Forward visibility (160m), based on DMRB, speed limit 50mph
- Forward visibility (90m), based on DMRB, speed limit 30mph
- Change of speed limit

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P0	02/01/24	Initial issue	MIE	ARM	NL	NL

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Client

Portsmouth City Council

Project

Portsmouth Local Plan Support

Title

Junction 8 - Lakeside Access Proposal - Geometries

Drawn	Checked	Reviewed	Approved
MIE	ARM	NL	NL
Original drg. size: A3	Date: 02/01/2024	Scale: 1:1000	Drawing Status: Preliminary

Drawing Number: GB01T23C11-DWG-101-8.1 Rev. P0

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Key:

- OS survey
- Proposed Cycleway
- Proposed Segregation
- Proposed Kerb Line
- Proposed Drop Kerb
- Proposed Transition Kerb
- Proposed Road Markings
- Belisha Beacon
- Proposed Shared Footway
- Proposed Footway

Bus shelter to be relocated along with the bus stop

Existing bus stops to be moved further down Kings Road to the east Refer to Drawing GB01T22C91-dwg-100-16.2

Tie into existing kerb line

St Paul's Road to become southbound one-way

Tie into existing cycleway

To be marked as a shared cycle/pedestrian footway

Existing bus stops to be moved further down Kings Road to the east Refer to Drawing GB01T22C91-dwg-100-16.2

Bus shelter to be relocated along with the bus stop

See drawing GB01T22C91-dwg-100-16.2

St Paul's Road

Kings Road

Flint Street

NO ENTRY

3.32

2.08

2.04

Scale 1:250 (m)

0 2 4 6 8 10

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P0	20/11/23	Initial issue	BG	ARM	NL	NL

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Client

Portsmouth City Council

Project

Portsmouth Local Plan Strategic Transport Assessment

Title

Junction 16 - Museum Road / Landport Terrace / Kings Road Proposal - Geometries (Sheet 1 of 2)

Drawn	Checked	Reviewed	Approved
BG	ARM	NL	NL
Original drg. size	**Date**	**Scale**	**Drawing Status**
A3	20/11/2023	1:250	Preliminary
Drawing Number			**Rev.**
GB01T23C11-DWG-101-16.1			P0

St Paul's Road

3.32

NO ENTRY

Kings Road

See drawing GB01T22C91-dwg-100-16.1

6 parking bays (~36m) to be removed

Proposed relocation of bus stops to allow for proposed crossing

Relocated bus shelter

3.00

3.07

3.00

BUS STOP

BUS STOP

Relocated bus shelter

11 parking bays (~64m) to be removed

Proposed relocation of bus stops to allow for proposed crossing

Scale 1:250 (m)

0 2 4 6 8 10

N

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Key:

- OS survey
- Proposed Cycleway
- Proposed Segregation
- Proposed Kerb Line
- Proposed Drop Kerb
- Proposed Transition Kerb
- Proposed Road Markings
- Belisha Beacon
- Proposed Shared Footway
- Proposed Footway

Rev	Date	Revision details	Drawn	Check.	Review	Approv
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Portsmouth Local Plan Strategic Transport Assessment

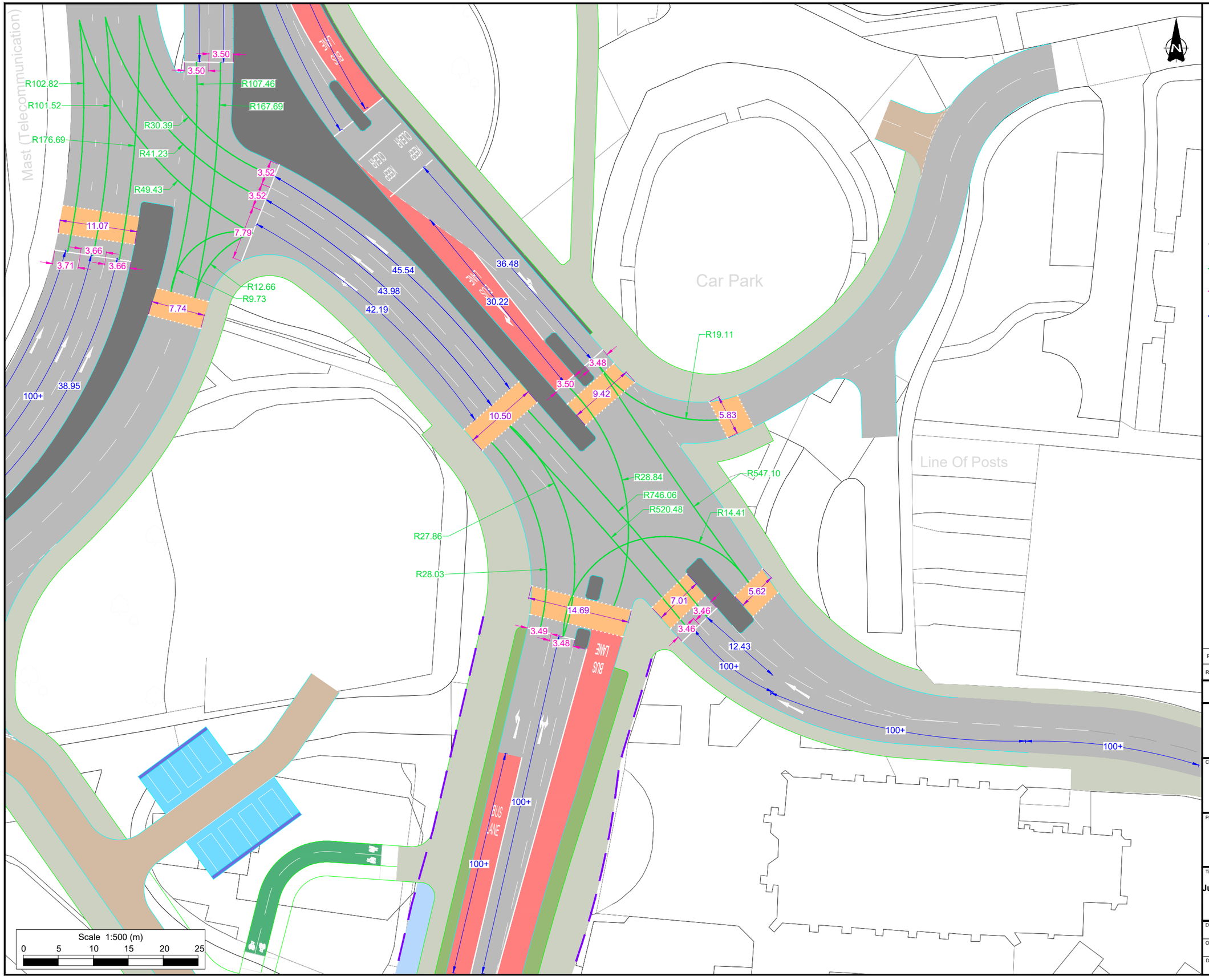
Title

Junction 16 - Museum Road / Landport Terrace / Kings Road Proposal - Geometries (Sheet 2 of 2)

Drawn	Checked	Reviewed	Approved
BG	ARM	NL	NL

Original drg. size	Date	Scale	Drawing Status
A3	20/11/2023	1:250	Preliminary

Drawing Number	Rev.
GB01T23C11-DWG-101-16.2	P0



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6. Refer to Stantec Drawing No. 332110641/5501/SK046 - PROPOSED FULL SCEME HIGHWAY ARRANGEMENT

Key:

- OS survey
- Turning Radius
- Lane Width
- Lane / Flare Length
- Signalised Pedestrian Crossing Length

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P0	20/11/23	Initial issue	BG	ARM	NL	NL

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Client

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Project

Portsmouth Local Plan Strategic Transport Assessment

Title

Junction 4 - Church Street Roundabout Proposal - Geometries (Sheet 1 of 2)

Drawn	Checked	Reviewed	Approved
BG	ARM	NL	NL

Original drg. size	Date	Scale	Drawing Status
A3	20/11/2023	1:500	Preliminary

Drawing Number	Rev.
GB01T23C11-DWG-101-4.1	P0

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6. Refer to Stantec Drawing No. 332110641/5501/SK046 - PROPOSED FULL SCEME HIGHWAY ARRANGEMENT

Key:

- OS survey
- Turning Radius
- Lane Width
- Lane / Flare Length
- Signalised Pedestrian Crossing Length

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P0	22/11/23	Initial issue	BG	ARM	NL	NL

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Project: **Portsmouth Local Plan Strategic Transport Assessment**

Title: **Junction 4 - Church Street Roundabout Proposal - Geometries (Sheet 2 of 2)**

Drawn	Checked	Reviewed	Approved
BG	ARM	NL	NL

Original drg. size	Date	Scale	Drawing Status
A3	22/11/2023	1:500	Preliminary

Drawing Number: GB01T23C11-DWG-101-4.2 Rev. P0

Scale 1:500 (m)
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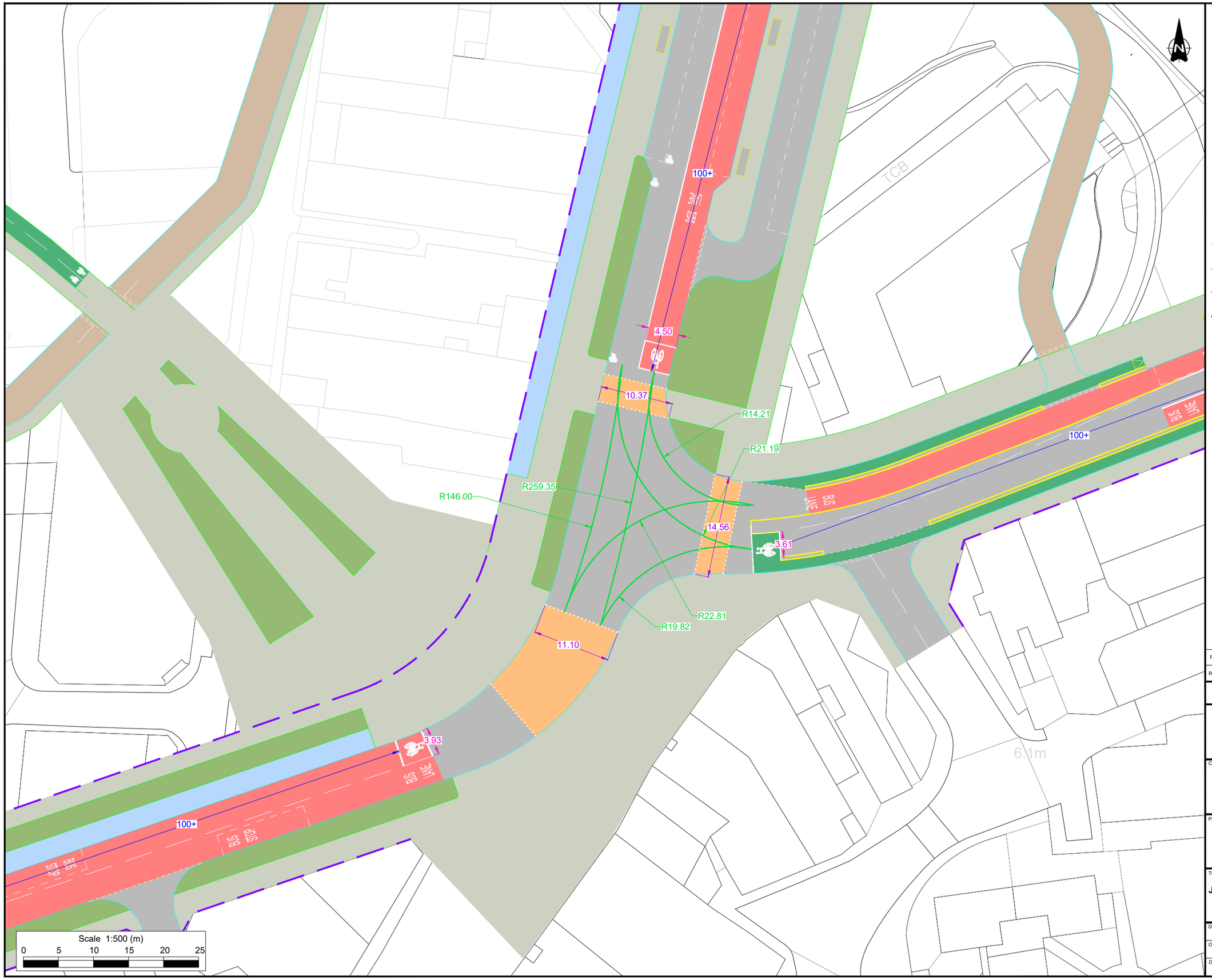

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6. Refer to Stantec Drawing No. 332110641/5501/SK046 - PROPOSED FULL SCEME HIGHWAY ARRANGEMENT

Key:

- OS survey
- Turning Radius
- Lane Width
- Lane / Flare Length
- Signalised Pedestrian Crossing Length

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P0	20/11/23	Initial issue	BG	ARM	NL	NL

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Client

Portsmouth City Council

Project

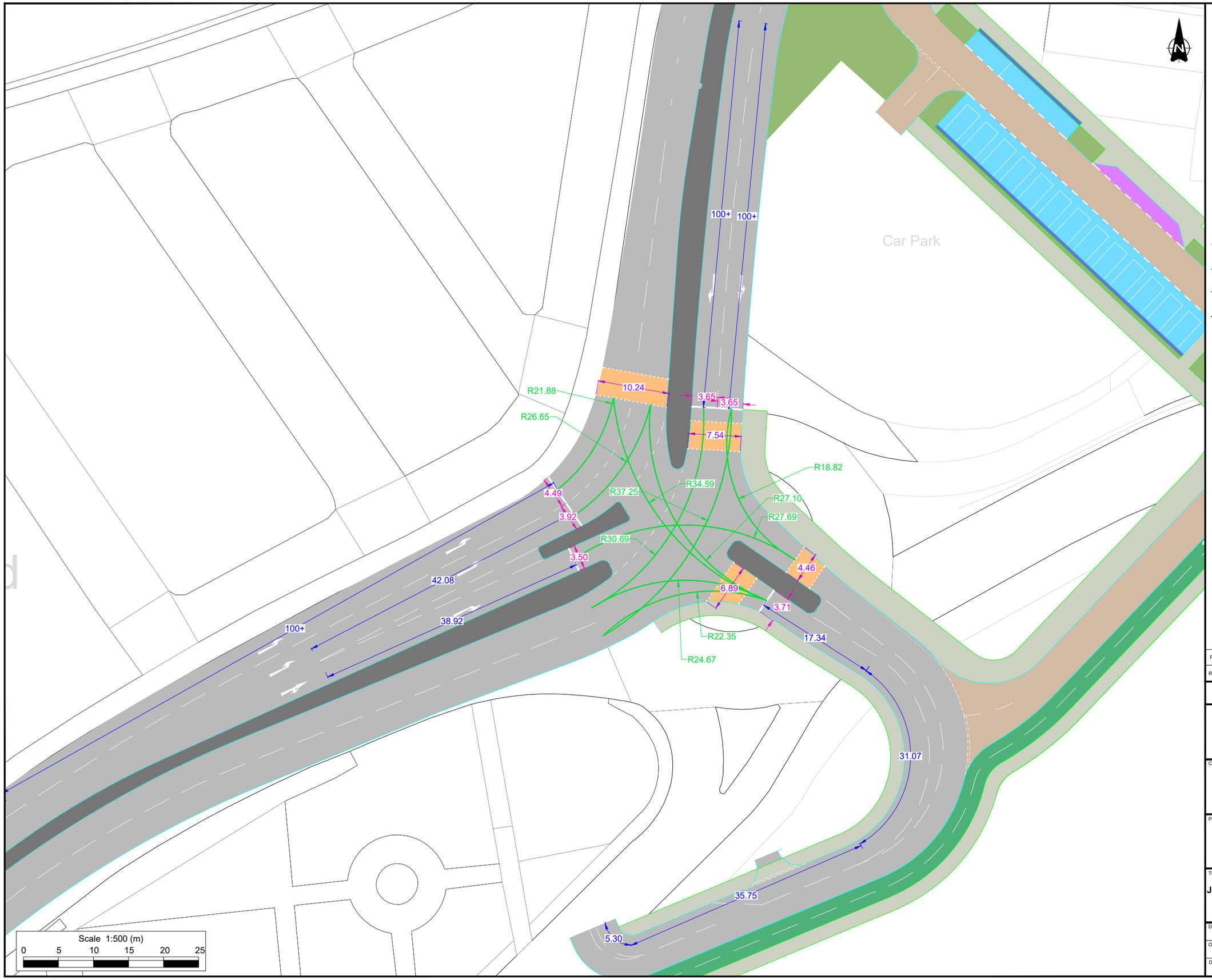
Portsmouth Local Plan Strategic Transport Assessment

Title

Junction 6 - Marketway Roundabout Proposal - Geometries

Drawn	Checked	Reviewed	Approved
BG	ARM	NL	NL
Original drg. size: A3	Date: 20/11/2023	Scale: 1:500	Drawing Status: Preliminary

Drawing Number: GB01T23C11-DWG-101-6.1 Rev. P0



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6. Refer to Stantec Drawing No. 332110641/5501/SK046 - PROPOSED FULL SCEME HIGHWAY ARRANGEMENT

Key:

- OS survey
- Turning Radius
- Lane Width
- Lane / Flare Length
- Signalised Pedestrian Crossing Length

Rev	Date	Revision details	Drawn	Check.	Review	Approv
P0	20/11/23	Initial issue	BG	ARM	NL	NL

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Client

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Portsmouth Local Plan Strategic Transport Assessment

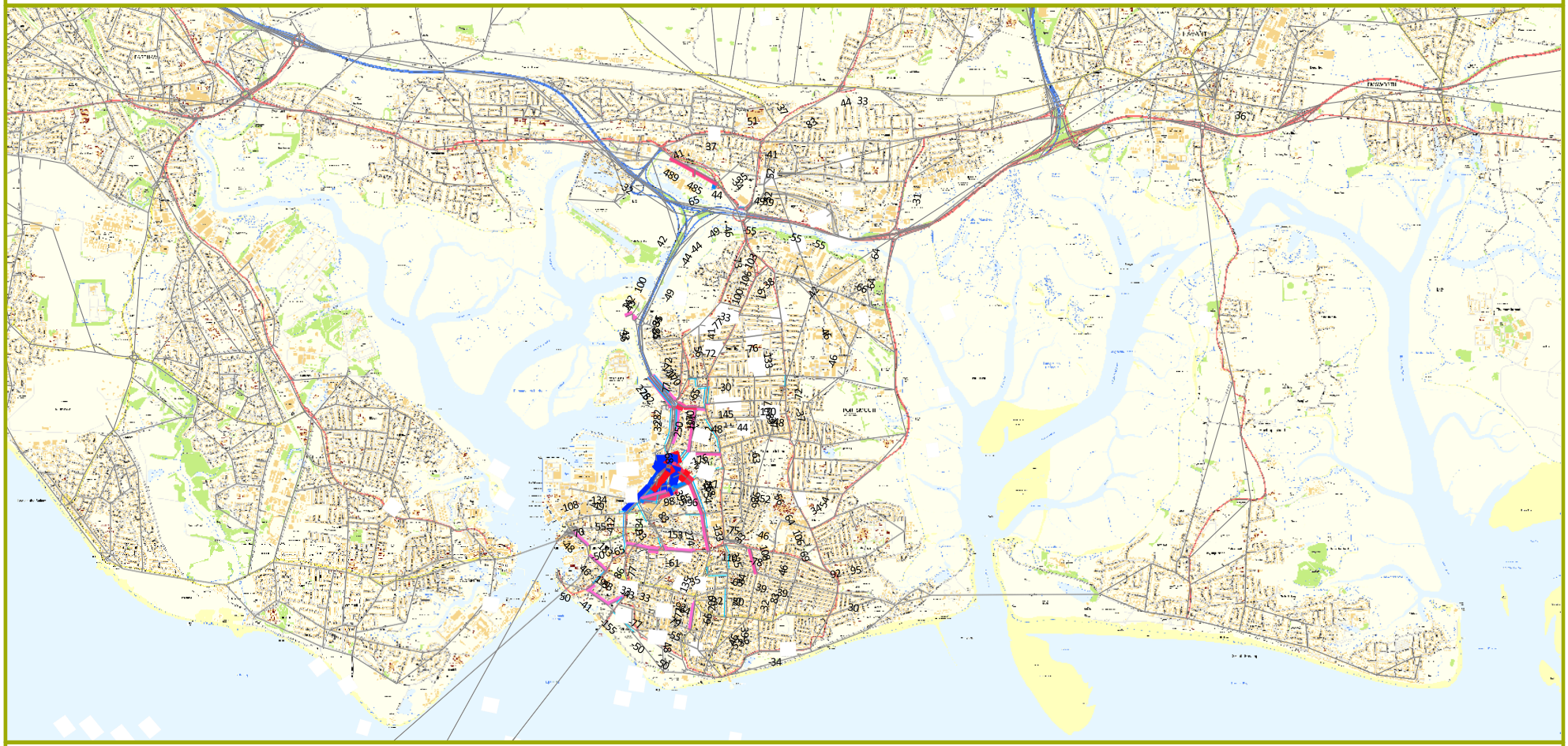
Title

Junction 13 - Hope Street Roundabout Proposal - Geometries

Drawn	Checked	Reviewed	Approved
BG	ARM	NL	NL
Original drg. size	**Date**	**Scale**	**Drawing Status**
A3	20/11/2023	1:500	Preliminary
Drawing Number			**Rev.**
GB01T23C11-DWG-101-13.1			P0

Appendix I - SRTM 2041 Do Something Plots

Baseline vs DM0 PT Plots - 2041 - Do something vs Do minimum AM Flow difference (Strategic view)



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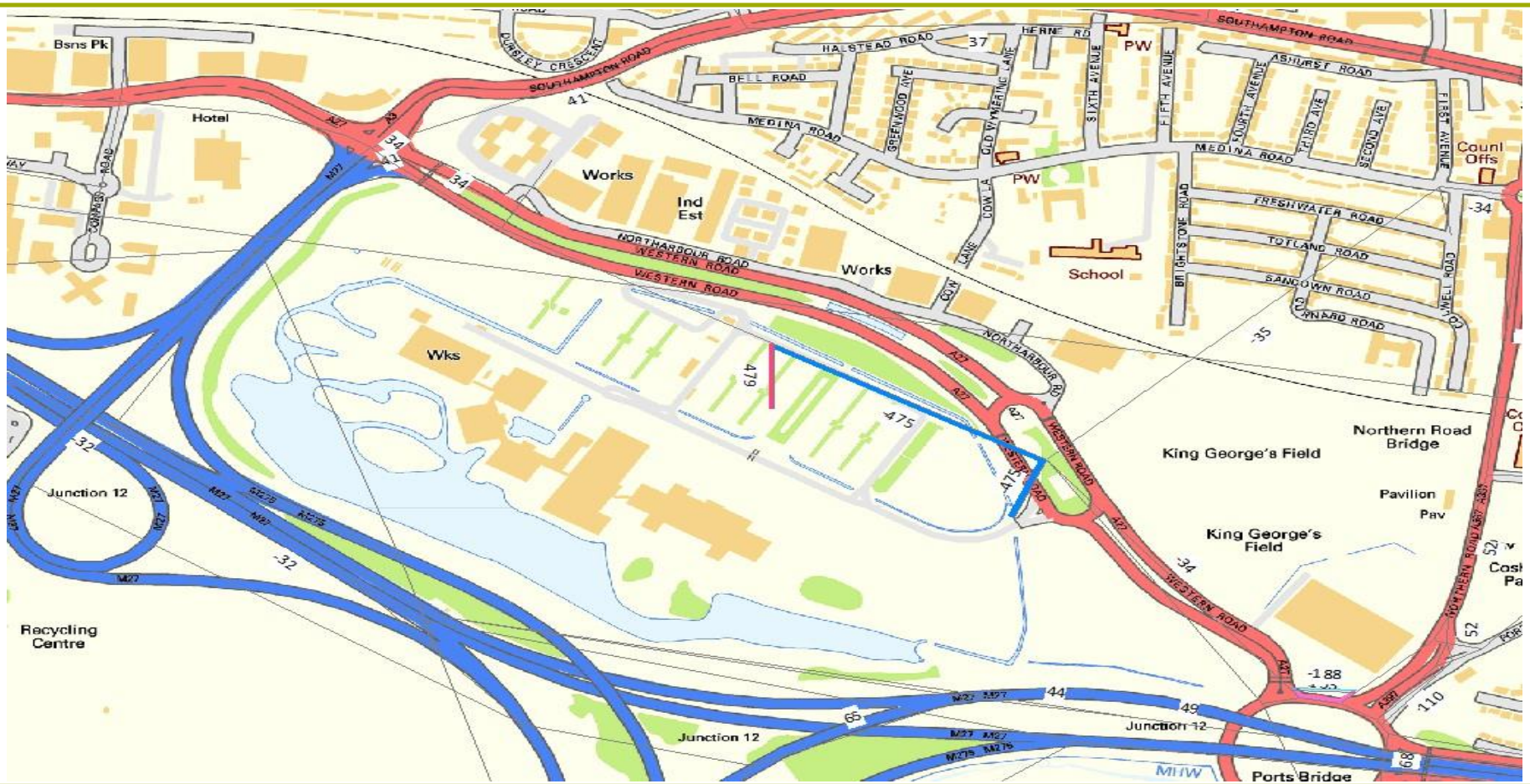
Baseline vs DM0 PT Plots - 2041 - Do something vs Do minimum AM Flow difference (Lakeside & Portsbridge Roundabout)



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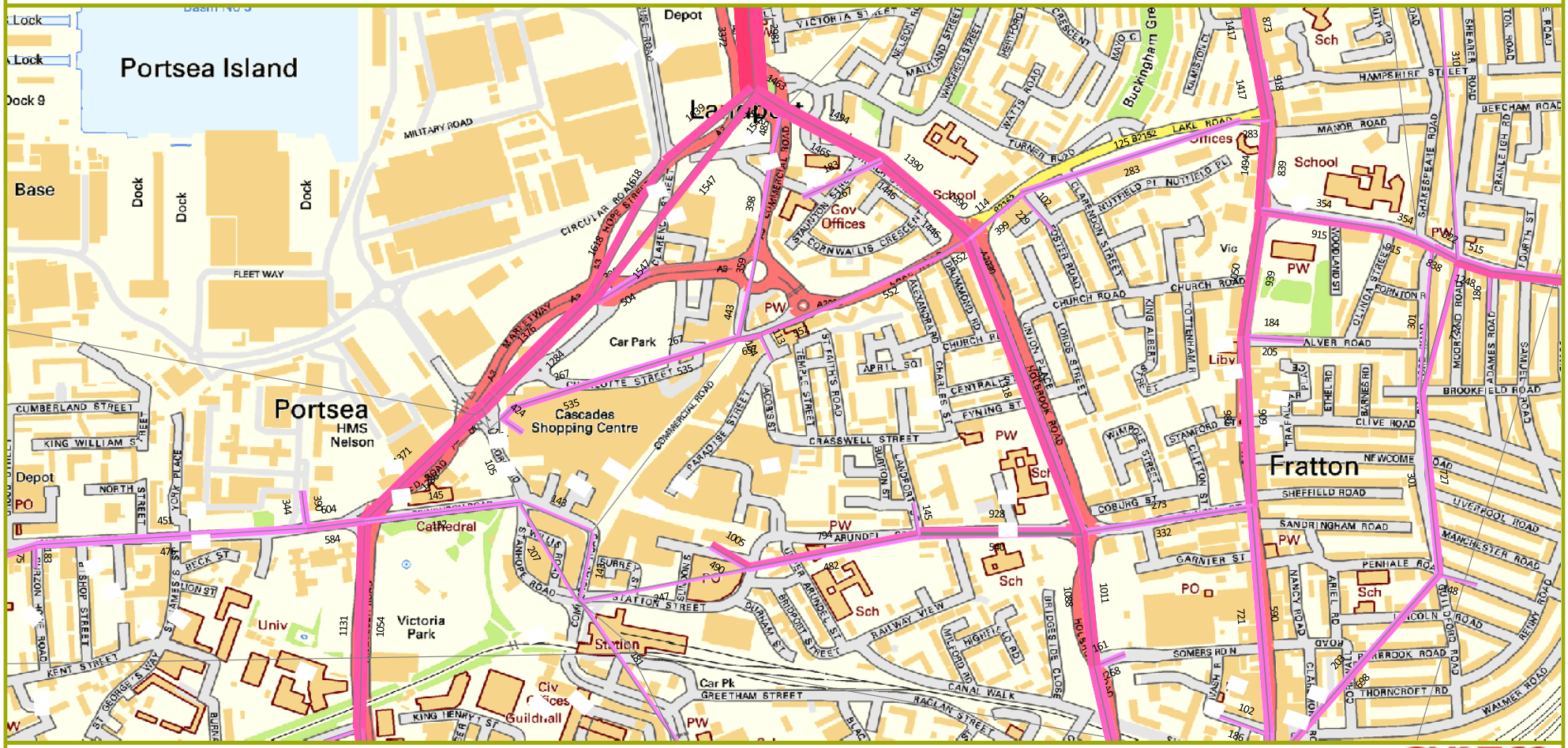
SYSTRA

Do something plots - 2041 - DS Flow AM City Centre



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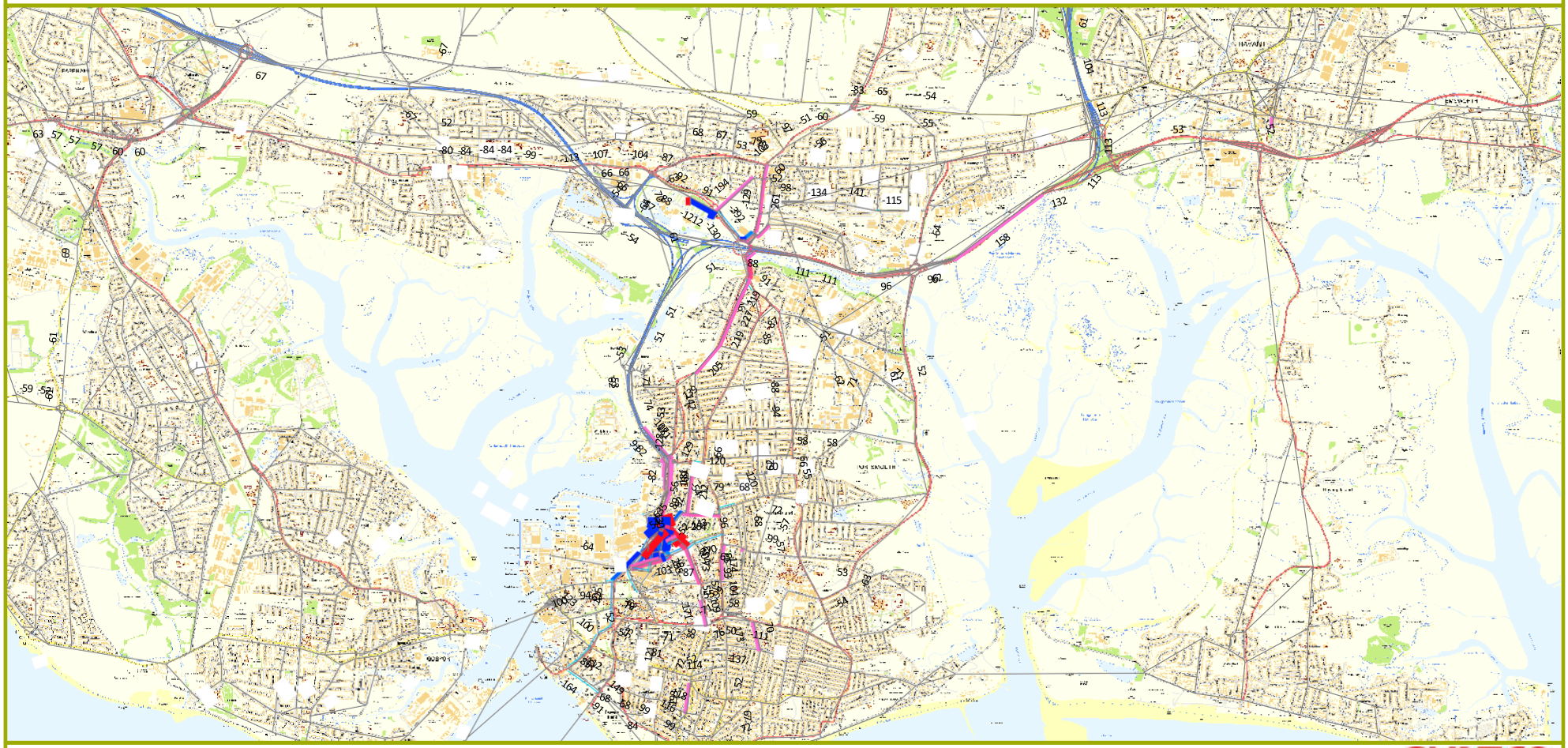
SYSTRA

Baseline vs DM0 PT Plots - 2041 - Do something vs Do minimum PM Flow difference (Strategic view)



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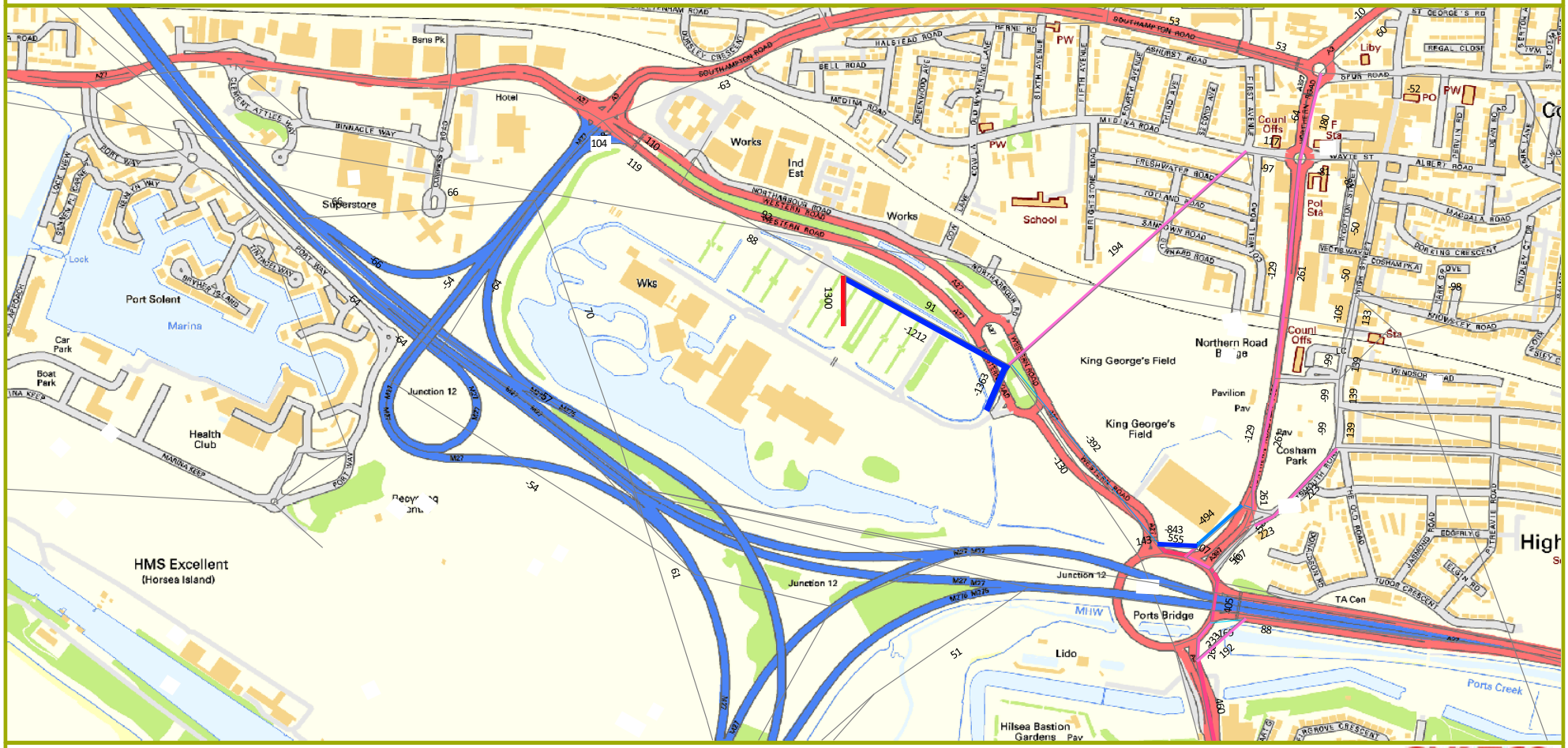
SYSTRA

Baseline vs DM0 PT Plots - 2041 - Do something vs Do Minimum PM Flow difference (Lakeside & Portsbridge Roundabout)



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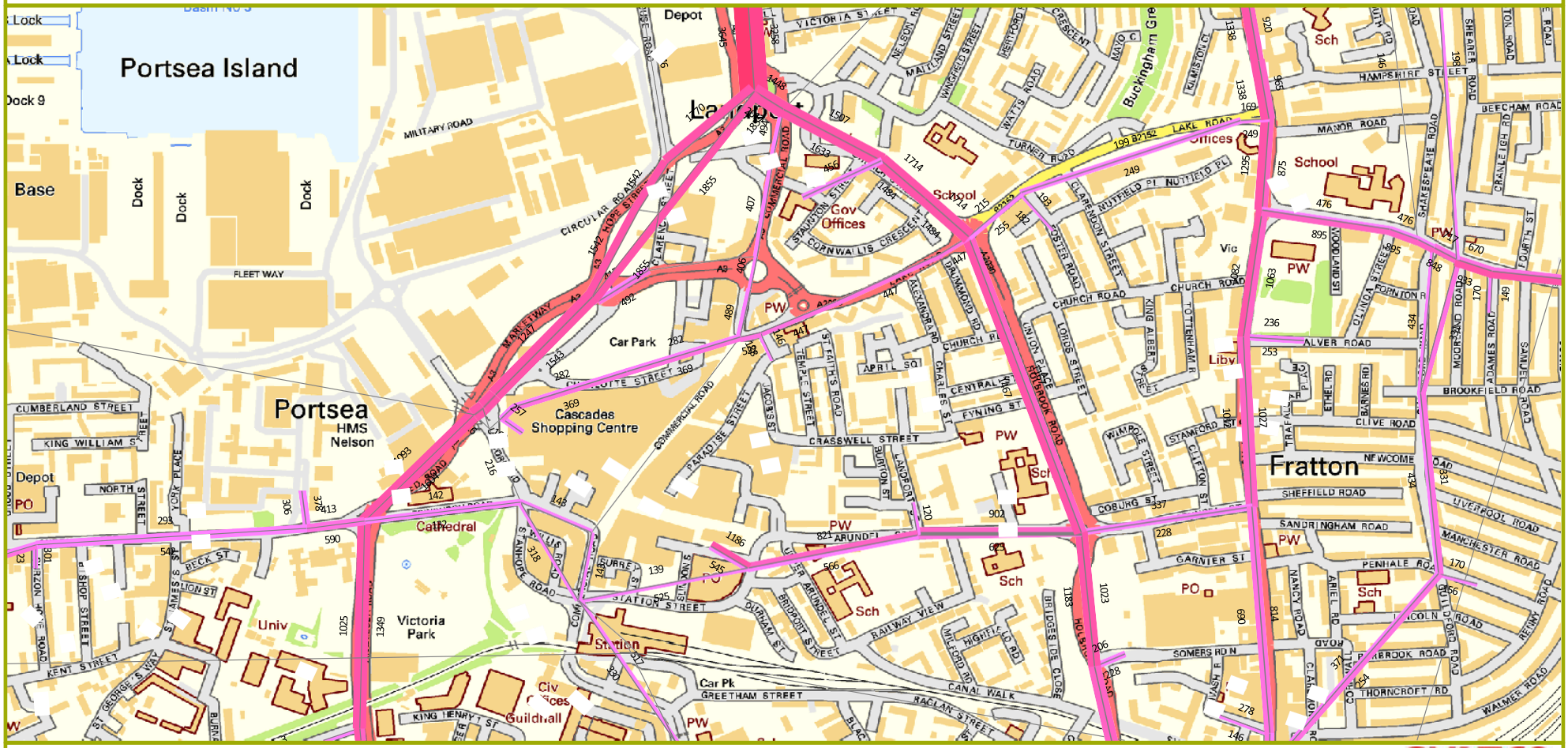
SYSTRA

Do something plots - 2041 - DS Flow PM City Centre



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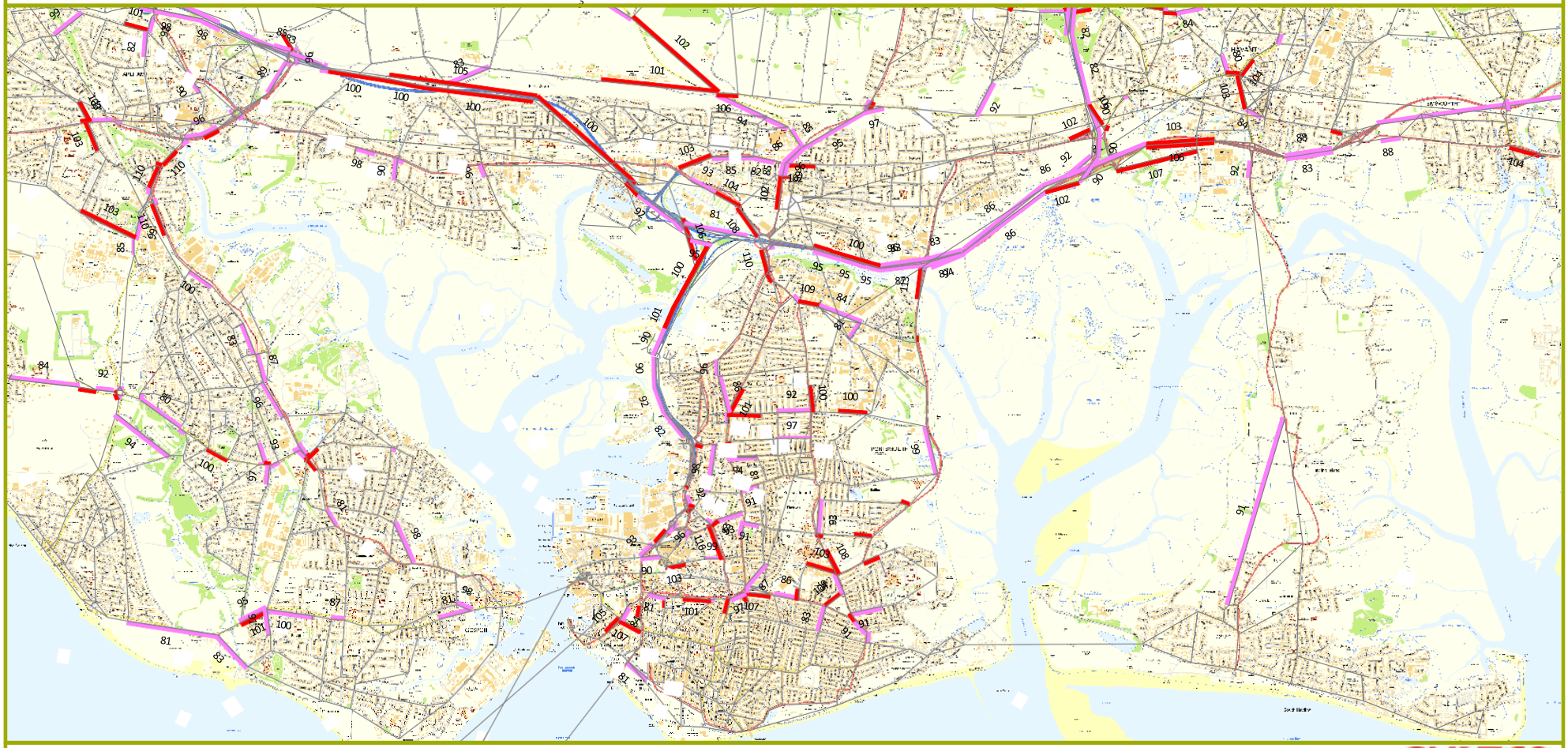
SYSTRA

Baseline vs DM0 PT Plots - 2041 - Do Something V/C AM



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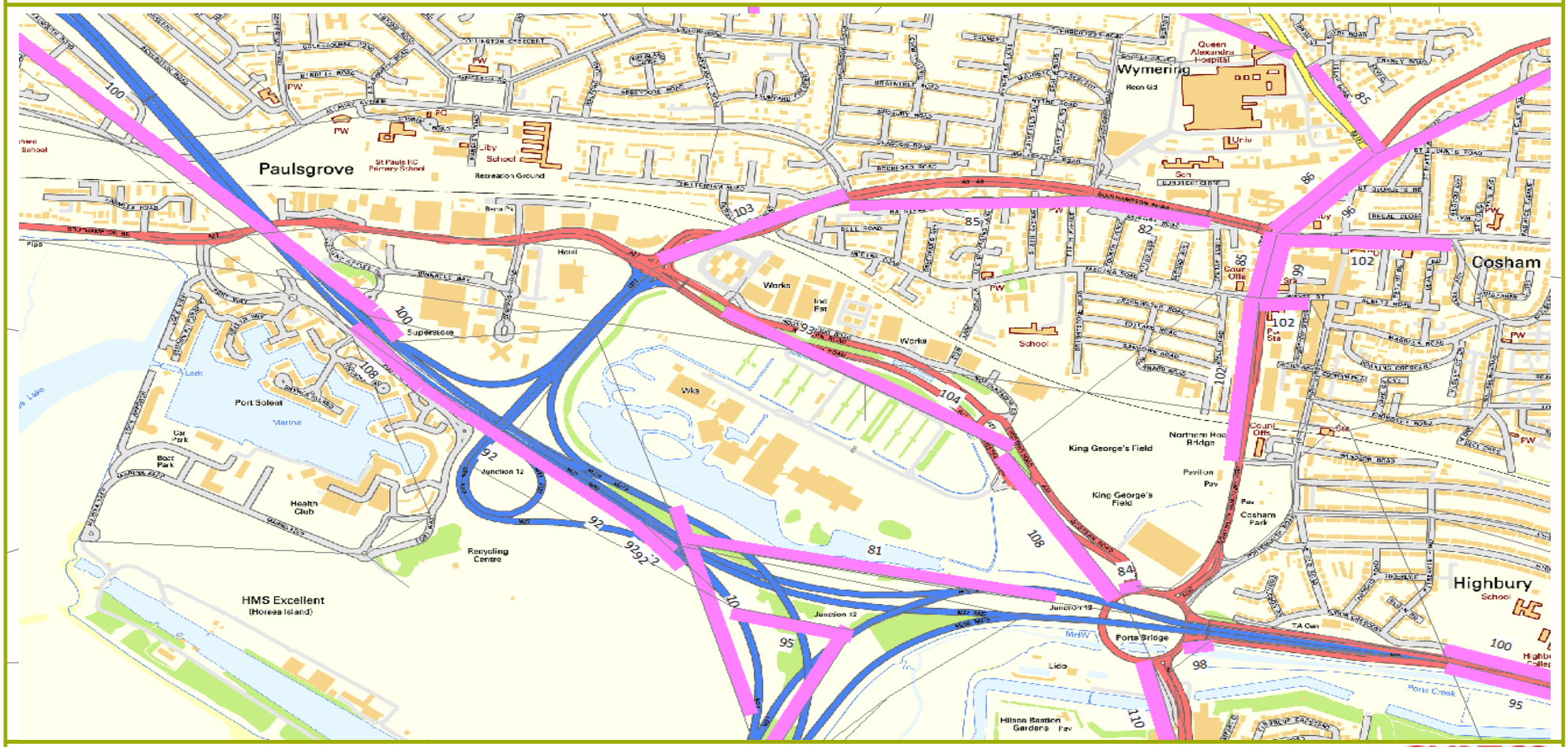
Do Something plots - 2041 - DS VC AM (Lakeside & Portsbridge Roundabout)



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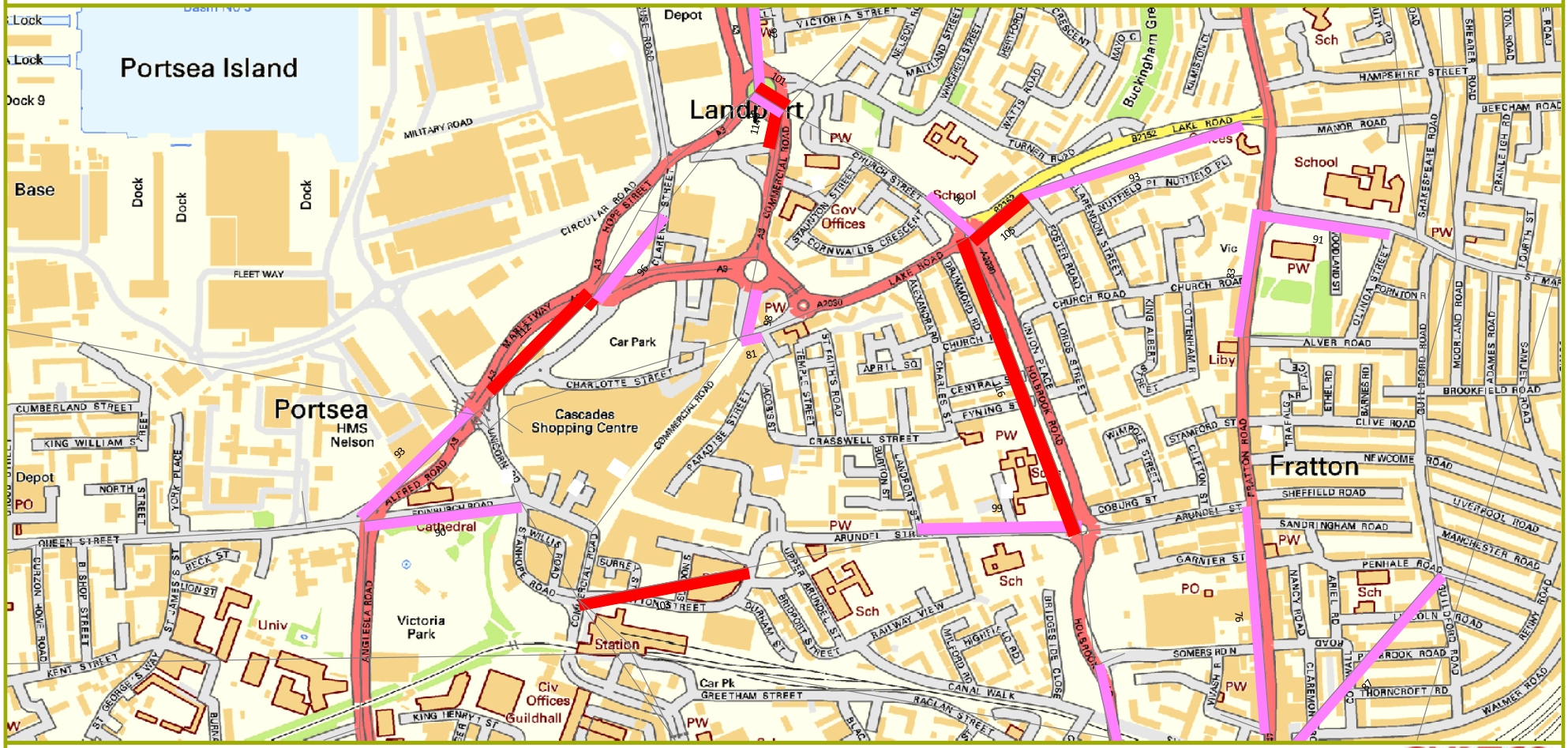
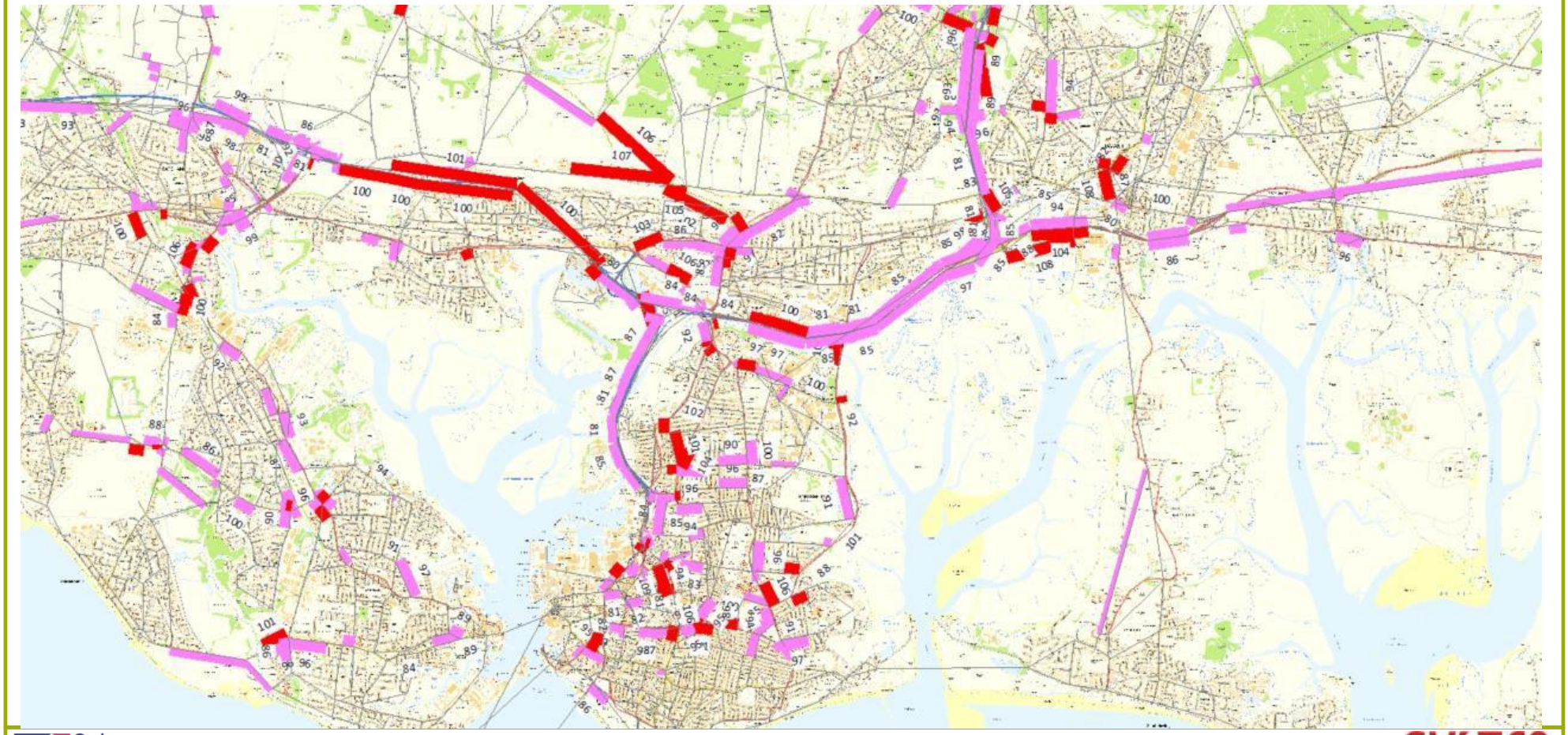
SYSTRA

Do Something plots - 2041 - DS VC AM City Centre



Baseline vs DM0 PT Plots - 2041 - Do Something V/C PM



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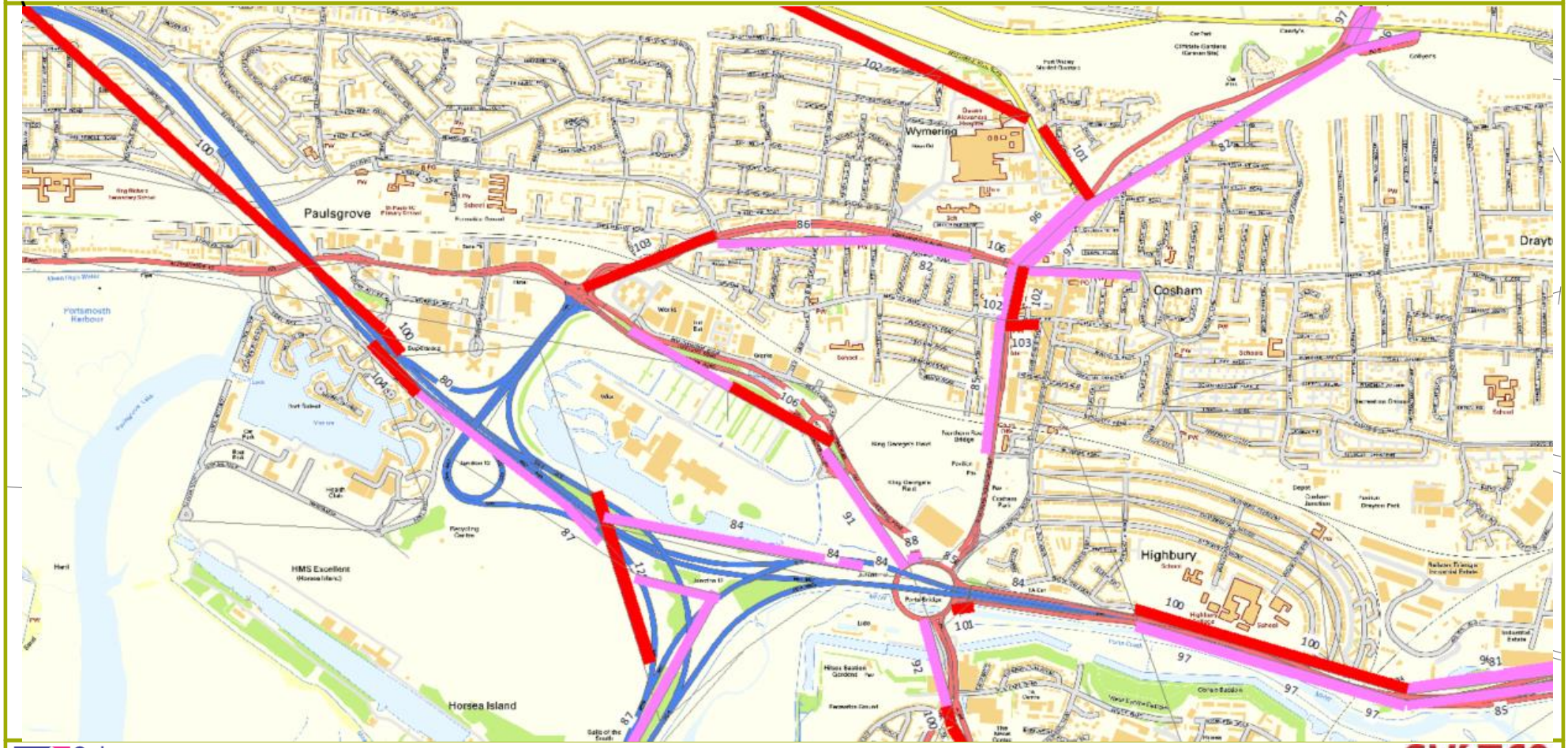
Baseline vs DM0 PT Plots - 2041 - Do Something V/C PM (Lakeside & Portsbridge Roundabout)



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SYSTRA

Do something plots - 2041 - DS VC PM City Centre

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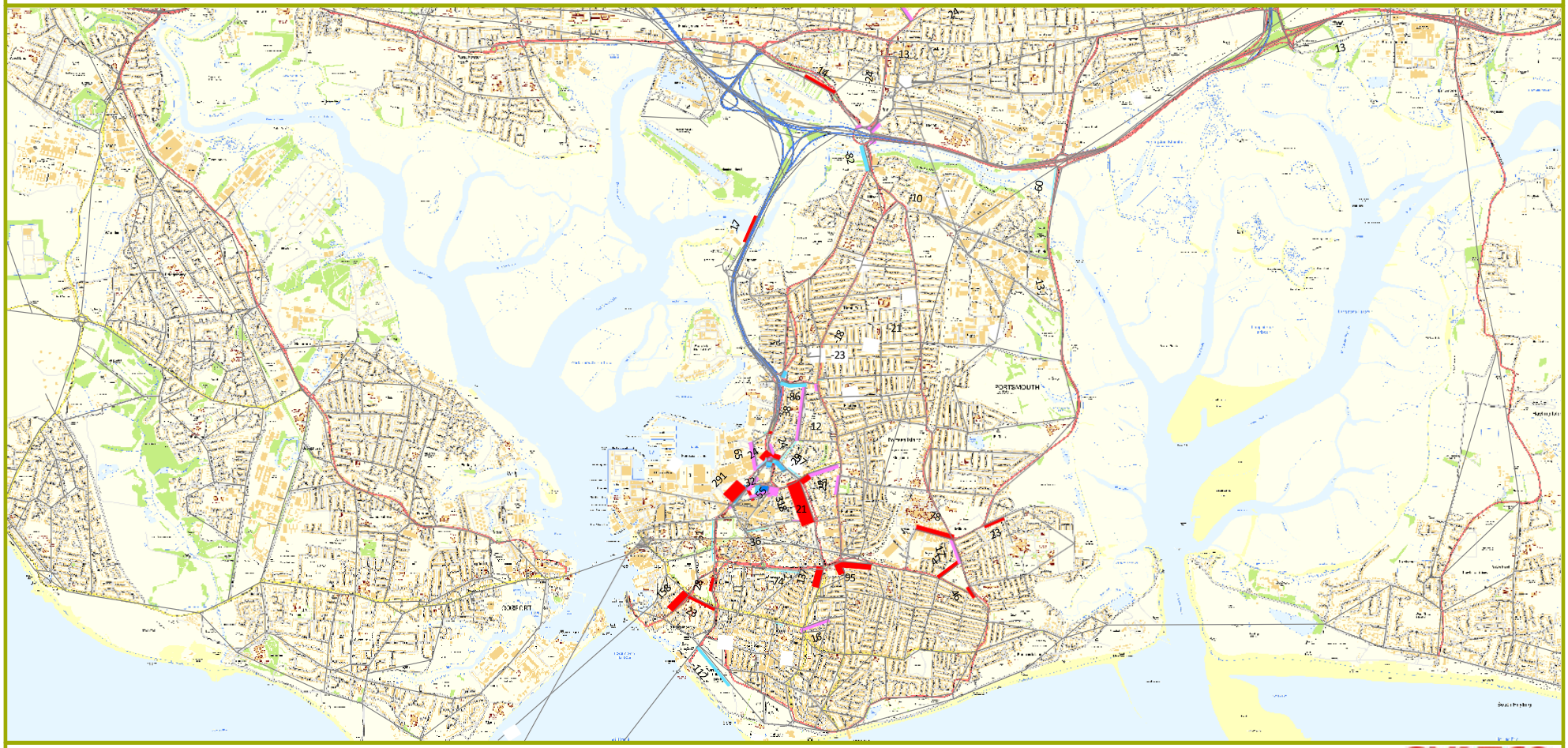
SYSTRA

Baseline vs DM0 PT Plots - 2041 - Do something vs Do minimum Delay AM (Strategic view)



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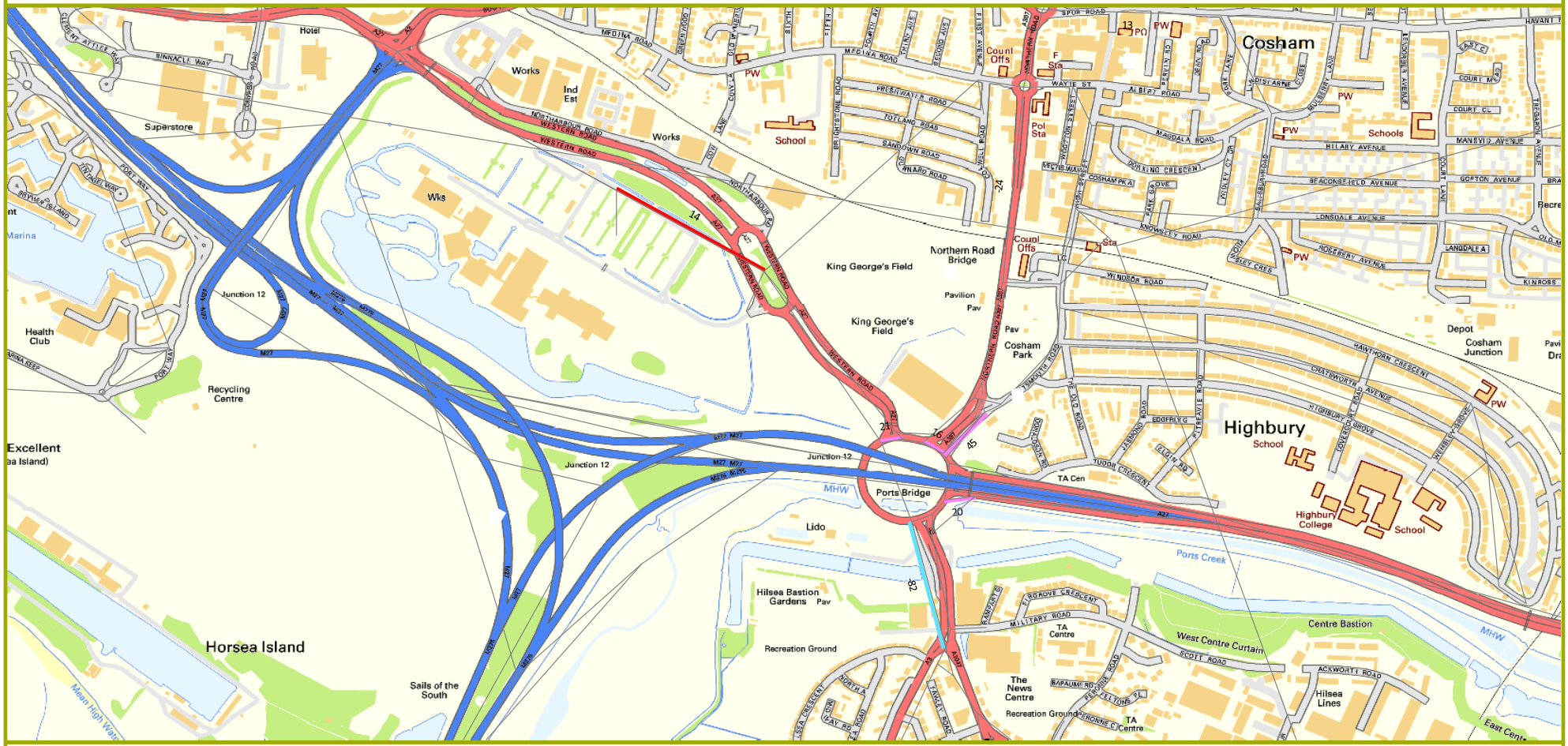
SYSTRA

Baseline vs DM0 PT Plots - 2041 - Do something vs Do minimum Delay AM (Lakeside & Portsbridge Roundabout)



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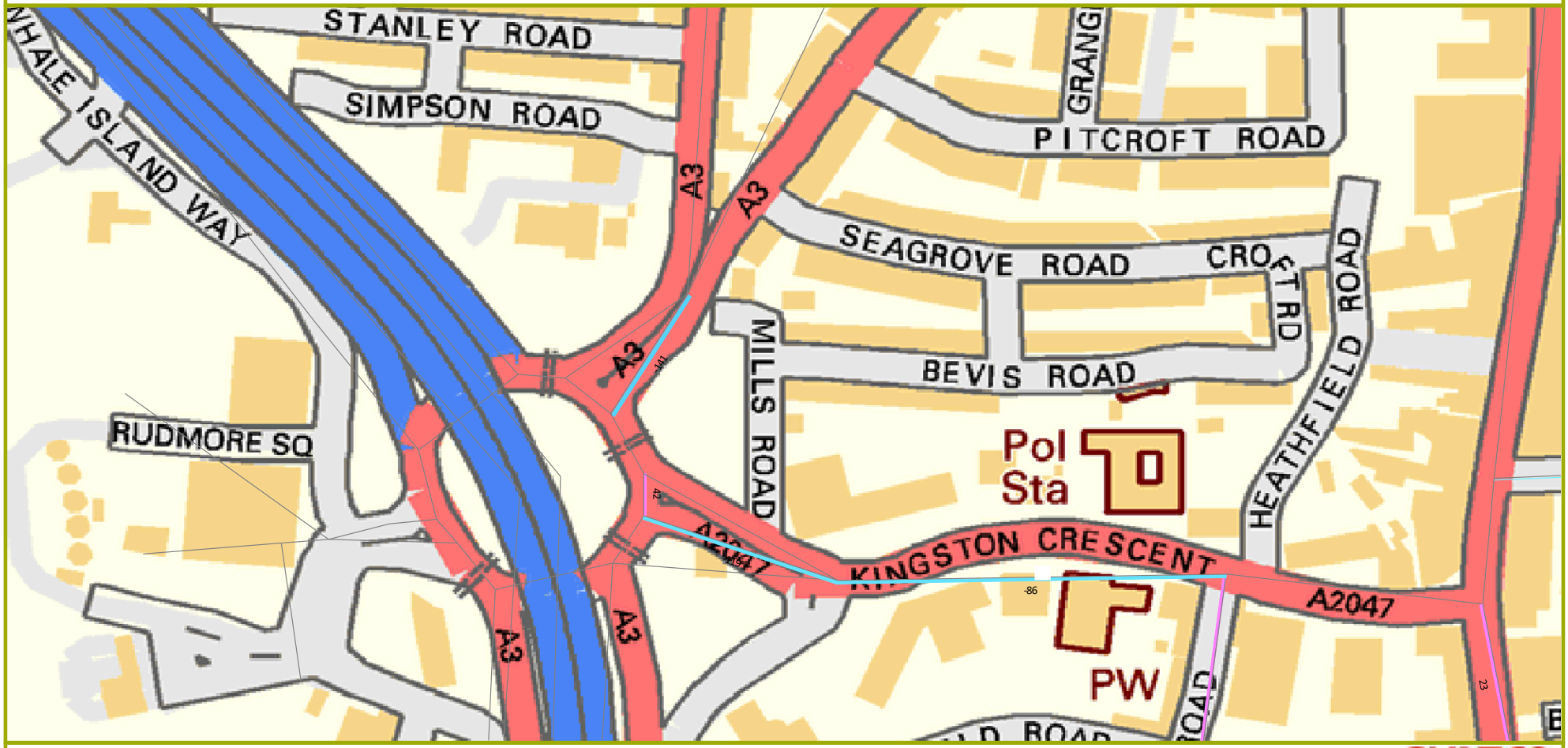
SYSTRA

Baseline vs DM0 PT Plots - 2041 - Do something vs Do minimum Delay AM (Rudmore Roundabout)



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SYSTRA

Do something plots - 2041 - DS Delay AM City Centre

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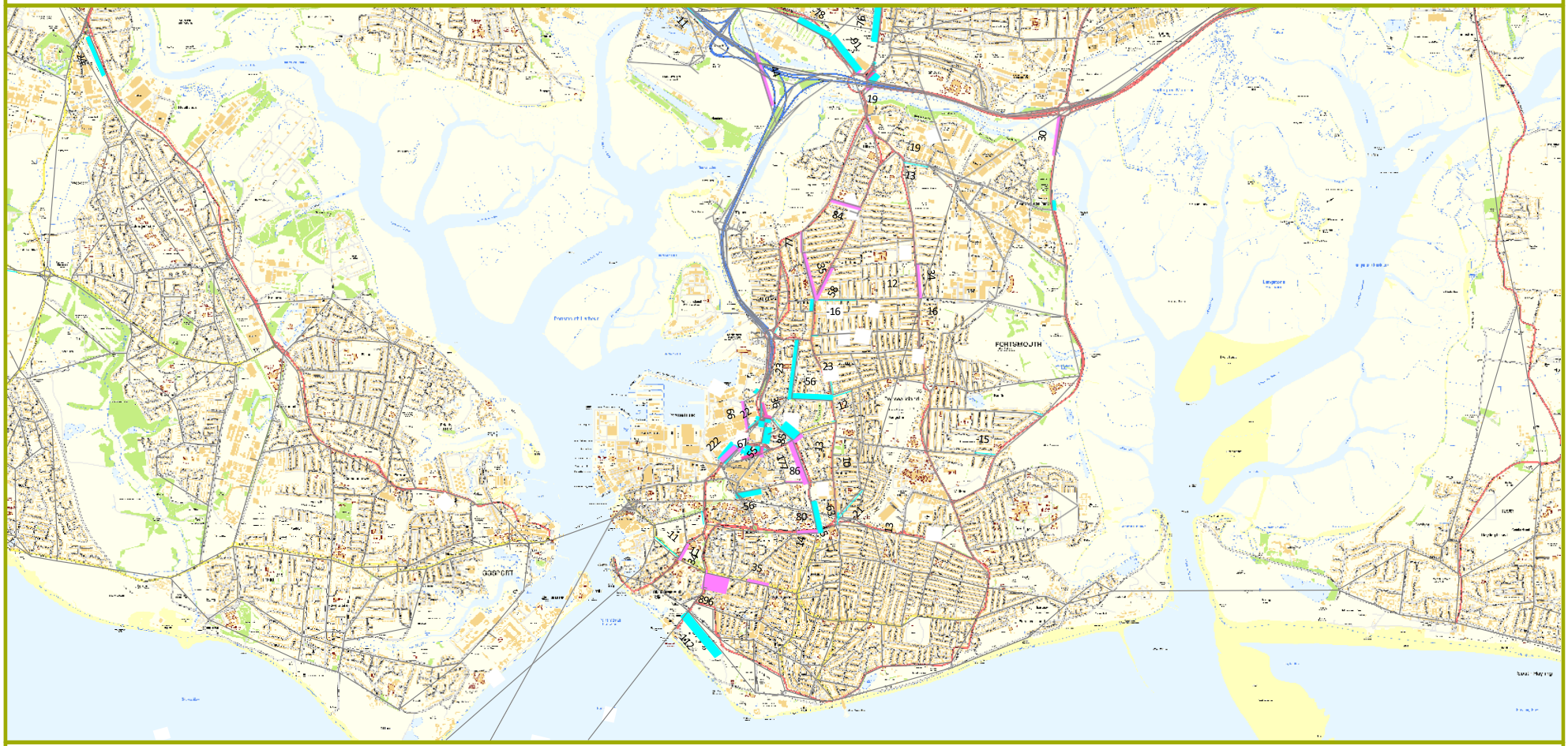
SYSTRA

Baseline vs DM0 PT Plots - 2041 - Do something vs Do minimum Delay PM (Strategic View)



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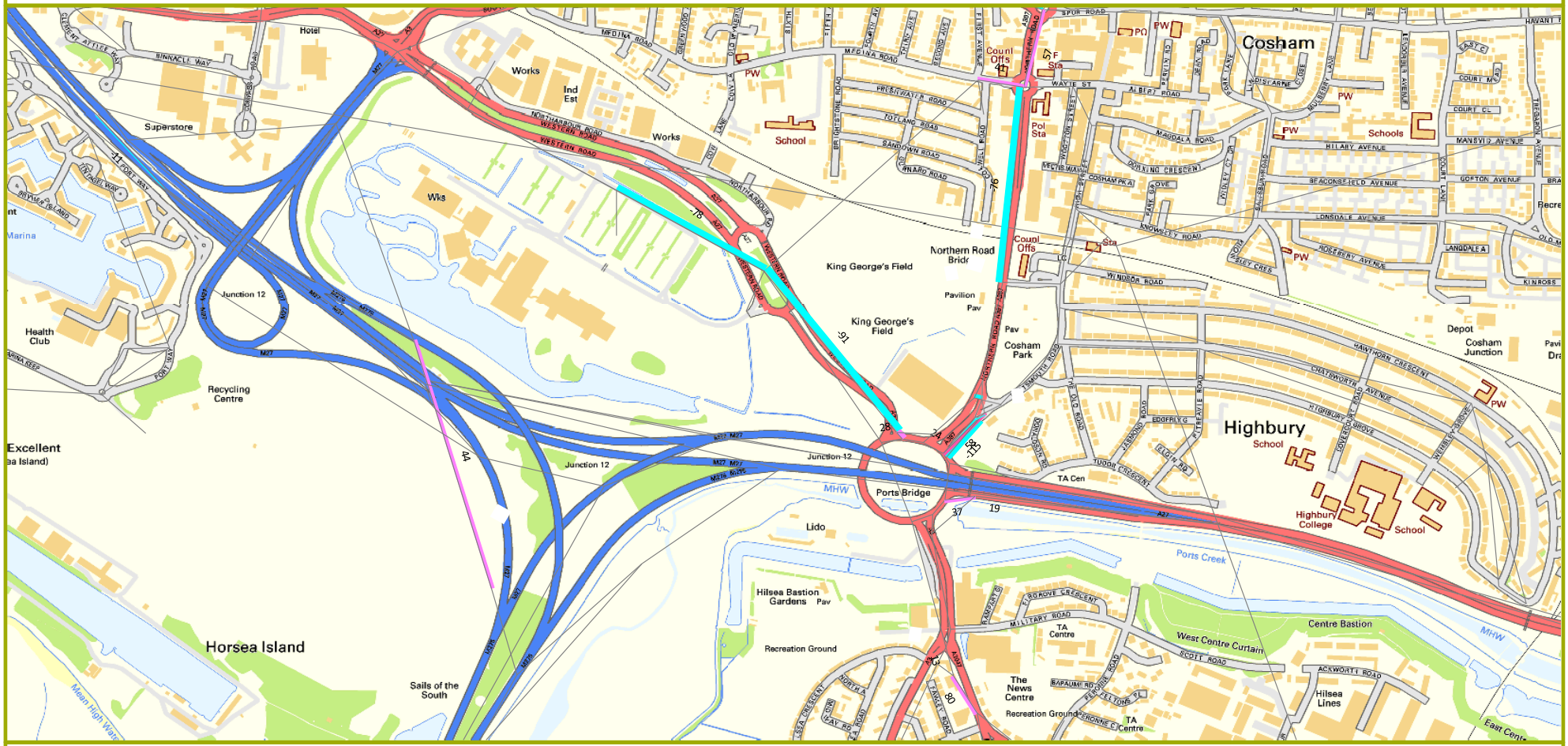
SYSTRA

Baseline vs DM0 PT Plots - 2041 - Do something vs Do minimum Delay PM (Lakeside & Portsbridge Roundabout)



Baseline vs DM0 PT Plots - 2041 - Do something vs Do minimum Delay PM (Rudmore Roundabout)

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Do Something plots - 2041 - DS Delay PM City Centre

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